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# THE CHEMIST AND DRUGGIST

ESTABLISHED 1859

THE WEEKLY NEWSPAPER FOR PHARMACY  
and all sections of the drug, pharmaceutical,  
fine chemical, cosmetic, and allied industries

*Official organ of the Pharmaceutical Society of Ireland  
and of the Pharmaceutical Society of Northern Ireland*

Volume 183

March 27, 1965

No. 4441

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# The CHEMIST AND DRUGGIST

Volume 183

MARCH 27, 1965

No. 4441

## Supercentre Pharmacy "SCENE SET FOR A TEST CASE"

THE imminent change of concessionaires of the area allotted to pharmaceutical sales at the West Bridgford, Nottingham, supercentre of G.E.M. Supercentres, Ltd. (see *C. & D.*, March 6, p. 226), is stated by the marketing correspondent of the *Sunday Times* (March 21) to have made the Pharmaceutical Society "increasingly afraid that its profession was in danger . . . from a competitive American wind of change."

The correspondent writes that Messrs. G.E.M. are putting in "a small London chemist, Mr. Jeffrey Breslaw [in the 1964 register there is an entry for Jeffrey Breslaw (Chemists), Ltd., at 91 Edgware Road, London, W.2] to run the concessions at Nottingham [held by Boots, Ltd., until the expiry of the present concession] and Leeds. It is stated that Mr. Breslaw is "taking up a challenge that the Boots chain has side-stepped," and "is preparing for the prospect that he will be struck off by the Society." Mr. J. G. Kalal (merchandising manager of G.E.M.) is reported as saying that "Boots didn't want too much hot water." The article goes on:

THE new attempt seems more formidable, and Kalal declaims flamboyantly: "I will press to the ultimate—the courts, Q.C.'s, Parliament—the right of having a complete pharmaceutical operation in our stores. . . . The little chemist dies, but people who come in with us grow big." Last week he was deep in lawyers' conferences—he has hired Lord Silkin's firm as solicitors, and the son, Sam Silkin, Q.C., as barrister. Breslaw was also taking legal advice.

But the new company Breslaw is forming must be registered with the Society. Now aware of his plans, they will draw his attention to the 1963 statement [of the Pharmaceutical Society that pharmacies should not be established in the indoor type of supermarket].

If they do strike him off for disobeying it, he can go on practising for three months while appealing to the High Court. The scene seems well set for a test-case. Will the pharmacist of the future be secluded in mahogany and decorative bottles? Or spotlight amid the chromium exuberance of the supercentre?

## Publicity for Medicines

### UNIFORM REGULATIONS URGED

THE varying regulations governing the publicity which can be given to pharmaceutical products in the twenty-one-member countries of the Organisation

for Economic Co-operation and Development (O.E.C.D.), are compared in a survey "Publicity for Pharmaceutical Products" issued recently by the Organisation. The work which was carried out by O.E.C.D.'s Special Committee for Chemical Products is in the form of comparative tables providing particulars of the publicity regulations in force at the end of 1964. It covers both scientific information for doctors, whether in the form of printed matter or medical samples, and publicity aimed at the general public. The general term of "publicity" covers a wide field, which in view of its implications for public health and the individual's freedom of choice cannot be a matter of indifference to national authorities, the report states. The committee emphasise that, so far as international trade is concerned, the lack of uniformity in the regulations is a severe handicap for exporters, who are forced to familiarise themselves with all the varying regulations. Some regulations are, moreover, very strict, fixing, for example, a short period during which samples may be distributed, with the result that it is harder for exporters to get their products known on some markets than on others. A final point made is that the growing ease with

which frontiers may be crossed makes it more difficult to exercise effective control. Radio and, to some extent, television advertising, extends beyond national frontiers; it is also difficult to guard against infringements of advertising regulations in imported newspapers and periodicals.

## Text of Labelling Bill

### FARM AND GARDEN CHEMICALS

THE text of the Farm and Garden Chemicals Bill introduced in the House of Commons by Mrs. Joyce Butler has been published (H.M. Stationery Office, price ninepence). Intention of the Bill is to require farm and garden chemicals to be labelled, and the Ministry of Agriculture, Fisheries and Food and Secretary of State for Scotland are given power under it to make regulations concerning pesticides and chemical products for use in agriculture and gardening. Control is to be applied to any substance, organic or inorganic, having any of the properties of:—

- (a) Destroying or repelling any insect, mite, mollusc, nematode, fungus, bacterial organism, virus, or other pest capable of destroying or damaging plants;
- (b) directly or indirectly controlling the activity of, or preventing or mitigating the harmful effect on plants of, any such pest;
- (c) destroying weeds;
- (d) acting as a bird or animal repellent, plant growth regulator, defoliant, desiccant or agent for thinning fruit or preventing the premature fall of fruit.

Preparations containing any substance coming within the definitions and intended for sale for use in agriculture or gardening for protection, or controlling the growth of, plants or for destroying weeds, may only be sold if



FINNISH PHARMACIST SHOWN INFRA-RED SPECTROPHOTOMETER; Miss I. D. Rautiainen, a Finnish pharmacist and head of the Registry of Drugs, Finnish Medical Board of Health, visited the Wellcome Chemical Works at Dartford, Kent, on March 11. She is here being shown an infra-red spectrophotometer by Dr. G. E. Foster (chief analyst). With them is Mr. R. J. Cross (Scandinavian area executive of the Wellcome Foundation, Ltd.).



labelled with the name of the substance and "a prescribed mark, symbol or colour to indicate the extent of any hazard which the product constitutes to human beings or other forms of life and to bear prescribed words or explanation or warning." The Ministers are to be given power to make such regulations as appear "necessary or desirable," after consulting with "such organisations as appear . . . to be representative of interests substantially affected by the new regulations." The Bill also includes provisions concerning the evidence of analysis of products in proceedings under the Act, and in the definitions it is indicated that "container" includes "any form of goods for sale as a single item whether by way of wholly or partly enclosing the goods or by way of attaching the goods to, or winding the goods round, some other article, and in particular includes a wrapper or confining band." The definition of "gardening" includes "destroying weeds in drives, paths and court-yards." The reference to "plants" includes "trees, bushes and seeds."

## IRISH NEWS

### THE NORTH

#### Ulster Chemists

##### MEMBERS TO HEAR N.P.U. SPEAKERS

A SPECIAL meeting of members of the Ulster Chemists' Association is being held in the lecture hall of the Pharmaceutical Society of Northern Ireland, 73 University Street, Belfast, at 8 p.m. on March 29. Speakers are Messrs. J. O. Bond (chairman, National Pharmaceutical Union Executive and N.P.U. Holdings, Ltd.) and J. Ferguson (deputy secretary, N.P.U.). They will give members first-hand information on N.P.U. Holdings, Ltd., N.P.U. marketing policy, and the benefits to be derived from the Chemists' Defence Association.

### THE REPUBLIC

#### Phenacetin

##### STATEMENT IN DAIL

THE Minister for Health (Mr. MacEntee) told Mr. T. F. O'Higgins (*Fine Gael*) in the Dail on March 11, that he had seen the recent statement issued by the Council of the Pharmaceutical Society of Great Britain with regard to phenacetin. He had not, as yet, seen any suggestion that phenacetin, or substances containing it, should be sold on medical prescription only. Such a limitation was not proposed in a report which he had received from *Comhairle na Nimheanna*, and which he was considering, containing their views on the question of imposing restrictions on the sale of a wide variety of medical preparations, including phenacetin. Phenacetin, he explained, was used in the Republic almost exclusively as an ingredient in other medical preparations. Although its occasional use was harmless, it certainly would be inadvisable for any person to take it, or any preparation containing it, regularly over an extended period or to give it to young children, otherwise than on medical advice.

## LABELLING OF DISPENSED MEDICINES

### Discussion in House of Lords

IN the House of Lords on March 17, LORD ST. JUST asked the Government to consider allowing a description of the contents of containers for drugs prescribed by doctors to be added to the label by pharmacists on the containers unless otherwise stated on the prescription.

#### Not a Legal Requirement

LORD TAYLOR (Parliamentary Under-Secretary of State) said he must first correct the implication in the question that in some way the permission of the Minister of Health was required before pharmacists could put the name of the drug on a dispensed medicine. Neither the law nor the pharmacists' National Health Service terms of service prohibited it. The ruling convention at the present time between the pharmaceutical and medical professions was that the pharmacist should not name the medicine unless specifically directed to do so by the prescriber. There were arguments for and against a change in the present practice, but it was clearly essential that any change should command general support in the two professions. Some years ago, following a request from the Minister of Health, the Joint Formulary Committee, on which the British Medical Association and the Pharmaceutical Society were represented, examined the problem, and in 1960 the Committee issued a statement which upheld the present practice. The British Pharmacopœia Commission had recently informed the Minister, that in its view "there are strong and compelling reasons why the labelling of dispensed medicines should be made normal practice." Lord Taylor understood that the Commission had brought that view to the attention of a number of other interested bodies, particularly the Joint Formulary Committee. LORD ST. JUST asked Lord Taylor if he would agree with the suggestion that on the whole doctors were not against the idea so much as the pharmacists themselves. and LORD TAYLOR replied that the suggestion was substantially correct, but it was only fair to the pharmacists to say that the automatic labelling of all prescriptions would involve them in a great deal of extra work, "particularly where prescriptions were written out in full." He continued "There are pros and cons. It is encouraging that the British Pharmacopœia Commission have taken this strong view, and I hope that the Joint Formulary Committee will in fact consider their view sympathetically."

BARONESS SUMMERSKILL hoped Lord Taylor would follow the matter up and press for "this small reform." Hospitals were already doing it, and the nurses and midwives were all asking for it . . . "the only people who object to it are some conservative practitioners, elderly practitioners, and the retail pharmacists." Baroness Summerskill asked if Lord Taylor was not aware that, although he had told the House the reason why retail pharmacists did not want to label because it would cause them a little more work.

"surely the most telling reason is that it would reduce their dispensing fees." LORD TAYLOR said he did not quite follow Baroness Summerskill's argument. It was true that in many hospitals the pharmaceutical staff adopted the practice as a general rule; and the Royal College of Nursing had certainly spoken in favour of labelling dispensed medicines with the name of the preparation, and probably the majority of the medical profession would favour that. It was, however, only fair to say that many retail pharmacists were heavily burdened with work, and it would involve them in substantial extra work.

LORD NEWTON pointed out that a doctor who wished what he dispensed to be fully described on the label could secure that that was done "simply by what he writes on his prescription." LORD TAYLOR agreed that that was true and added "But it may mean that he has to repeat every prescription twice on the prescription form, because he writes a direction to the chemist stating how the drug should be labelled and the dose to be given as well as the actual prescription." LORD FRASER then pointed out that every medicine sold openly in a chemist's shop or elsewhere "must be labelled with the prescription on the bottle or, indeed, where possible on each unit"; that had been the law for twenty-three years, and "now it was only the doctor who purveyed secret remedies." That was positively dangerous, because one might have in one cupboard, as he had, half a dozen bottles, and have forgotten what they contained and what they were for. LORD TAYLOR agreed that that was one of the compelling reasons why it would be desirable that all prescribe medicines should be labelled. LORD AMULREE referred to dangers that might come from the mixture of incompatible drugs that were not properly labelled and asked for the Minister "or someone at the Ministry" to encourage consultations once more between the medical profession and the pharmacists "to see whether they can not come to some sensible way of settling this matter."

LORD TAYLOR said, "I sincerely hope that as a result of the recommendation by the British Pharmacopœia Commission to the Joint Formulary Committee, on which both the pharmacists and the British Medical Association are represented, that this matter will be considered again. . . ."

#### Explanation

BARONESS SUMMERSKILL then explained what she meant by stating that pharmacists would lose dispensing fees. "If the people in the country use up all the half-filled boxes of tablets which were in their medicine cupboards, because they were not fearful of taking something which was labelled then inevitably retail pharmacists must lose financially." LORD TAYLOR replied "self-medication of patients with the residue of labelled products is not always desirable."



## NEWS IN BRIEF

THE remuneration of dentists in health centres has been increased and now ranges from £1,500 to £2,825.

AWARDS made recently by the Council of the Royal Society of Medicine include a gold medal to Professor Sir Hans Krebs; Professor R. H. S. Thompson has been made Jephcott lecturer.

PLANNING consultants are to examine the feasibility of providing homes and jobs for 300,000 people within an area of Berkshire and Wiltshire bounded by Hungerford, Thatcham, Didcot and Swindon.

FOLLOWING the theft of 1,100 Drinamyl tablets from the pharmacy of R. & T. Adam, Ltd., 8 Roseneath Street, Edinburgh, 9, recently, police have warned retail chemists to examine, and improve if necessary, the security of their premises.

THE Board of Trade have agreed to provide financial support which will enable the organisers of the British Trade Exhibition in Addis Ababa (November 27 to December 6), to reduce rents charged provided space bookings reach a certain agreed minimum.

A GRANT of £6,300 from the Wellcome Trust will supplement a grant of £20,000 from the University of Edinburgh for the work of Professor G. H. Beale on the development and inheritance of characters of single-celled organisms being carried out in the Institute of Animal Genetics.

THE British Plastics Federation has elected Mr. N. Iliff (managing director, Shell Chemical Co., Ltd.), *President* of the Federation, Mr. H. A. C. Collinson has been elected *Chairman*, and Mr. J. A. Pentecost (director, A. Boake, Roberts & Co., Ltd.), *Vice-chairman*.

THE proceedings of the fourth A.B.C.M. packaging conference, held in Harrogate during November 1964, are now available in book form from the Association of British Chemical Manufacturers, Cecil Chambers, 86 Strand, London, W.C.2. Cost is £1 1s. per copy, including postage (cash with order). For a report of the conference see *C. & D.*, November 14, 1964, p. 495.

ONLY one sample of a pharmaceutical product called for comment in the report of the Birmingham city analyst (Mr. A. H. Coombes) for the fourth quarter of 1964. An informal specimen of eye ointment in a tube was found to contain a foreign metallic particle in its contents, leading the Health Committee to decide to prosecute.

THE Rt. Hon. Sir Benjamin Ormerod has been appointed a member and *Chairman* of the Statutory Committee of the Society for a period of five years from March 11. A solicitor in 1913, Sir Benjamin was called to the bar in 1924. He became a Judge of the High Court in 1924, and was a Lord Justice of Appeal, 1957-63.

## LOCAL OFFICERS

### PHARMACEUTICAL SOCIETY

South Lincolnshire.—*Chairman*, R. Day; *Vice-chairman*, R. W. Page; *Treasurer*, K. Smith; *Secretary*, K. Smith, Beken, 31 Halmer Gate, Spalding, Lincs.

# TOPICAL REFLECTIONS

By Xrayser

## Council statement

It would appear that the opinions of your correspondent, Mr. A. P. Wilcox (p. 283), differ in some respects from those I expressed a week or two ago in connection with the Council statement on phenacetin. Since writing the column I have spoken to many pharmacists who have been concerned with public reaction to the matters contained in the statement, as they were bound to be. I should have thought that that was a natural assumption and not an arrogant one. In saying that his own task *vis-a-vis* the public will be made much easier by the public announcement of the Council, it seems that Mr. Wilcox expects to be concerned too. But your correspondent calls the statement a "public announcement." The statement was published in the official organ of the Pharmaceutical Society in the same manner as has been adopted for other matters affecting its members, and it concludes: "Pharmacists can make a contribution to public health by warning regular purchasers," etc. That does not suggest that the statement was intended as a public announcement. I had, and have, no possible complaint over the Council's statement to its members. I did complain, and I feel the complaint is valid, that the public learned of the contents of the statement before it was in the hands of the members. But Mr. Wilcox disappoints me. I posed the question how one should react to a direct inquiry as to whether prescribed tablets contained phenacetin, and the only help your correspondent offers is to say that any experienced pharmacist surely has sufficient wit and intelligence to answer such queries without either alarming the patient or disclosing the exact chemical composition of the product. His gentle admonition that I have a lot to learn yet about the proper discharge of professional duties is understandable, as is his relief that I am not a member of Council, but the points are hardly relevant and do not provide the answer. The prescribed tablets were a proprietary on free sale to the public.

## Seaweeds

Seaweeds have been found to have a variety of uses in modern times. We, in pharmacy, have known the use of seaweeds in the production of iodine, and *Fucus vesiculosus* has a place in our botanical studies. I have recently been reading an account of the simpler life as detailed in a work called "A Description of the Western Isles of Scotland," written by M. Martin, Gent., and published in London in 1703. For my convenience, and that of others of our time, the whole work was reprinted in 1934, with an introduction by Donald J. Macleod, O.B.E. It contains a chapter of great interest on "the diseases known and not known in Skye." The sea plant called dulse entered largely into the treatment of illness, an infusion of the weed and fresh butter acting as a laxative. Headache was removed by taking raw dulse combined with another sea plant called linarach, and the latter also had a reputation as a remedy to procure sleep. But not all treatment was so simple, for desperate diseases called for desperate remedies, and the iliac passion (here described by Martin as twisting of the gut) was treated by the giving of a draught of oatmeal water and hanging the patient by the heels for some time, followed by a cataplasm of dulse to the lower part of the belly.

## An early psychologist

The book gives an interesting account of a blacksmith in the parish of Kilmartin, who cured faintness of spirit in the following manner: "The patient being laid over the anvil with his face uppermost, the smith takes a big hammer in both hands, and making his face all grimace, he approaches his patient; then, drawing his hammer from the ground, as if he designed to hit him with his full strength, he ends in a feint, else he would be sure to cure the patient of all diseases; but the smith has a dexterity of managing his hammer with discretion, though at the same time he must do it so as to strike terror into the patient, and this always has the designed effect." A mighty man was he!



# Supply of Oxygen Equipment

## REVISED CONDITIONS AND REMUNERATION FOR CONTRACTORS

NEW conditions and scales of remuneration for chemist contractors supplying oxygen have been agreed between the Ministry of Health and the Central N.H.S. (Chemist Contractors) Committee.

### Revised Conditions

Executive Councils are being directed to compile by April 30 new lists of chemist contractors who are prepared to comply with the conditions (see below). Contractors must satisfy the Council that they:—

- (a) regularly stock oxygen equipment, as specified in the Drug Tariff, and oxygen gas on the premises, and
- (b) are prepared, when it would not be reasonable to expect that the patient's representative could safely do so or when he is unable to do so, to deliver the oxygen set and cylinders to the patient's premises, to collect empty cylinders when they are being replaced, and to collect the set and cylinders when informed that treatment has been discontinued, and
- (c) are prepared to erect and explain the operation of the oxygen set at the patient's home, particularly when the patient is having oxygen therapy for the first time.

Contractors not at present in the oxygen list may be included in it at any time if they satisfy Councils that they are prepared to undertake the service and meet the conditions. Councils are asked to satisfy themselves from time to time, and at least annually (preferably in the early autumn), that the contractors included in the lists continue to provide the full service. The lists when ready are being circulated to general practitioners and chemist contractors. They will include name of contractor, address of his premises and normal hours of business, his telephone number, whether he is available for emergency cases (at what hours and where), and the number of oxygen sets he stocks.

### Terms of Remuneration

Revised terms of remuneration, effective from April 1, are payable to chemist contractors in respect of the loan and delivery of oxygen therapy equipment to National Health Service patients. They apply to all prescriptions dispensed on or after that date, to the loan rates for equipment already on loan, and to the allowances for delivery or collection undertaken on or after that date in respect of prescriptions first dispensed before that date.

Provision is made for paying to chemists' allowances for delivering oxygen sets and cylinders to patients' homes, and for collecting sets and cylinders on completion of treatment. Contractors are required to submit claims for payment of those allowances on a new form, EC66(a). The pricing bureaux will check that each claim is in respect of the delivery of a set and/or cylinders ordered by a doctor on an EC10 or EC10(D) form or that it is in re-

spect of the collection of a set and cylinders previously supplied.

The revised provisions relating to the calculation of payments for oxygen therapy equipment and oxygen gas supplied by chemists to N.H.S. patients are as follows:—

For supplying oxygen equipment as specified in clause 5 of part VII of the Drug Tariff and/or oxygen gas, payment shall consist of:—

#### 1. (A) BASIC PRICE

- (I) For the loan of oxygen equipment to National Health Service patients as set out in clause 5 of Part VII of the Drug Tariff

- (a) Lightweight single unit, set conforming to specification O1, including mask (spec. O1, 2A(i)) or multiple unit set conforming to specification O2, 1 including mask (spec. O1, 2A(i)) (b) (but see E.C.N. 503, paragraph 6, regarding withdrawal of multiple unit sets).
- (b) Stand for the oxygen cylinder where necessary in the interests of safety.
- (c) Mask (other than those included with oxygen sets) as set out in the Drug Tariff in spec. O1, 2A & B (where specified by prescriber in the initial order for the set).
- (d) Replacements, Disposable plastic mask in sealed transparent envelope (Spec. O1, 2A(i)(b)). Adult size. Child's size (where specified by prescriber). Mask (other than those included with oxygen sets) as set out in the Drug Tariff in spec. O1, 2A & B (when prescribed after the initial order, on a separate prescription).

13s. for first week (or part of), 7s. 6d. per week for next three weeks (or part of), 4s. 6d. per week for remainder of six months (or part of) and 2s. per week subsequently.

Excess, if any, of Tariff price over 4s.

2s. each.

2s. each.

Tariff price.

As set out in Part VA of the Drug Tariff.

- (II) For the supply of oxygen gas.

less (B) A Discount, if appropriate, in accordance with the scale referred to at clause 2A(b) of Part II of the Drug Tariff,

plus (C) An On-cost Allowance of 14 per cent. of the basic price at (A) above in accordance with part II clause 2A(C) of the Drug Tariff.

#### 2. PROFESSIONAL FEES

Lightweight single unit set or multiple set. Mask or masks when not supplied in conjunction with a set but against a separate prescription.

4s. 6d. per set.

6d. per prescription, 2s. 3d. per cylinder.

Oxygen gas, ADDITIONAL FEE

Where the set and/or cylinders are not delivered by the chemist to the patient's home, and the prescription is endorsed URGENT by the prescriber, and dispensed at a time when the premises are not open for dispensing (the hour to be endorsed by the chemist).

2s. 3d.

#### 3. CONTAINER ALLOWANCE

An allowance in accordance with part VIII of the Drug Tariff. 1-8d. per prescription.

#### 4. ALLOWANCES FOR DELIVERY

An allowance for the delivery or collection of sets or sets and cylinders or the delivery of cylinders in accordance with the following scale.

	For each return journey up to (and including) 5 miles each way	For each return journey over 5 miles each way
Delivery of set and cylinders or of replacement set.	14s. 6d.	31s.
Delivery of cylinders (when not in conjunction with a set).	5s.	18s.
Collection of a set and cylinders at the end of treatment.	5s.	18s.
Additional allowances payable when the set/cylinder(s) is delivered by the chemist to the patient's home, and where the prescription is endorsed URGENT by the prescriber and is presented for dispensing.		
(a) After normal closing hours and before midnight.	6s. 6d.	10s.
(b) After midnight and before 8 a.m.	12s. 6d.	19s.

Note 1. Except where, in emergency, a set has been loaned by a distant contractor, oxygen gas shall be supplied to a patient only by the chemist who has loaned the set. When, exceptionally, cylinder replacements are provided by a chemist other than the one who supplied the set, he should at the time when cylinders are supplied satisfy himself that the patient continues to operate the equipment satisfactorily.

Note 2. Delivery and collection of sets and/or cylinders is to be undertaken by the patient's representative where he is willing and the chemist can fully satisfy himself that the representative is able to transport a set and/or cylinder, carry it and secure it in position in the house and fit the mask after the instructions provided in the set have been explained to him. In other circumstances delivery, erection and collection of sets and/or cylinders and the explanation of the operation of oxygen equipment at the patient's home, particularly at the commencement of treatment, is to be undertaken by the contractor.

Note 3. Where a doctor orders on one prescription form more than 3 x 48 c.f.t. cylinders and the chemist uses a private vehicle for delivering them to the patient's home, delivery allowances will be paid on the basis of one return journey for every three cylinders or balance of an order in excess of a multiple of three cylinders, or for the actual number of return journeys, whichever is the less. For example:

Where, say, four cylinders are included in one order and (a) they are delivered to the patient's home individually, in two's, or "three and one," two delivery allowances will be paid; or (b) all the cylinders are delivered in one journey, only one delivery allowance will be paid.



## DRUGS AND DRESSINGS

### Suggested method of quality control of hospital supplies

THE Ministry of Health has circulated to hospital authorities a memorandum (H.M. (55) 22) dealing with the quality control of hospital supplies of drugs and dressings. The memorandum "commends to hospital authorities a report of a working party of the Hospital Pharmacists' Consultative Committee dealing with: (1) Quality control at manufacturers and methods of obtaining interchange of information about manufacturers; (2) quality control in hospitals; (3) rules for storage of medicines in hospital wards and departments.

The Ministry states that the report contains valuable recommendations and suggestions and that the principles outlined are acceptable. "The method by which the report is implemented must, however, depend on the circumstances in each Region."

#### Reporting Back

Regional Hospital Boards are asked "to send to the Department (Supply Division) by September 30 reports on the progress it has been found possible to make. Boards of Governors are similarly asked to send reports on these matters insofar as they are concerned."

Section (i) of the report of the working party is as follows:—

1. The aim is that regional contracting authorities should deal only with firms whose ability to supply specified drugs of acceptable quality has been established and to initiate a procedure to enable hospital authorities to be safeguarded against supplies of doubtful merit.

2. The immediate needs are:—

(1) to compile a list of all existing hospital suppliers and the drugs they supply, and using that list (a) to approve firms considered to be satisfactory for the whole range of their products; (b) to indicate firms considered fit to supply only a limited range of products; (c) to remove from the list any firms considered to be unsuitable;

(2) to inspect firms not known to the Department and to act as at (1)(a), (b) or (c) above.

3. It is not proposed that this list should be issued to contracting authorities but information will be available in confidence on request.

The list will need to be kept up-to-date by (1) inspections of firms not on the list applying to contracting authorities or to the Department; (2) subsequent inspections of firms on the list which may reveal deterioration.

4. To ensure that a standard procedure is applied, inspections on behalf of regional contracting authorities should be carried out by the Department in association with a hospital pharmacist from the region.

5. Contracting authorities should issue invitations to tender rather than advertise their requirements. [The Ministry, however, state that it might be necessary to advertise on occasions.]

6. An offer at very advantageous prices from a firm which is not on the Department's list—or in respect of drugs outside the limited range referred to in paragraph

2(1)(b)—need not be rejected if arrangements can be made with the Department for ensuring the maintenance of the required quality throughout all stages of production.

7. Contracting authorities should supply the following information to the Department: (1) The names of suppliers other than those directly under contract; (2) any other useful information becoming available—e.g. the comparative life or keeping properties of products from different suppliers that might become evident from shelf examinations.

8. It would be convenient for the purpose of this scheme for the Department to deal with one representative for each region and it is considered that he should be a pharmacist appointed by the board.

Section (ii) deals with quality control in hospitals and suggests that the quality checks should be divided into three categories:—(1) Simple tests for identity and physical and chemical characteristics; (2) tests requiring special equipment; and (3) tests requiring highly specialised facilities.

It is envisaged that the simple tests would be done in hospital or group hospital pharmacies and the tests requiring special equipment at one regional centre, which would generally be in one of the pharmacies of the region; the highly specialised tests would be done by consultants, that term being used to cover universities, schools of

pharmacy, public analysts or public health laboratories.

"Pyrogen testing presents a special problem in that very limited facilities are available outside the pharmaceutical firms and some University Departments. The Department would find it useful to learn of regions which have access to University facilities and whether any are able to offer help to regions without such access."

The scheme should also embrace surgical dressings. A "tiered" system might possibly be organised where the hospital or group hospital is concerned with packaging and content; fibre identification; texture; absorbency; acidity; effects of heat; weight per unit area (where appropriate); and elasticity.

At regional level the following tests might be carried out:—Weight of fabric; weight of film; weight of adhesive mass; foreign matter; ash; water soluble extract; fluorescence; water-proofness; and sterility tests.

It is suggested that in order to facilitate and co-ordinate quality control activities within the regions each regional contracting authority for pharmaceutical supplies should inform the Department (Technical Services Branch) of the results of all tests.

That would enable the Department to maintain a watching brief over the progress of the scheme and help to avoid possible multiplicity of testing.

Section iii of the report sets out the rules for storage of medicines in hospital wards and departments (other than pharmaceutical departments).

## DOCTORS AND THEIR PAY

### An insurance scheme for private practice

AN "insurance scheme for private practice," devised by the private-practice committee of the British Medical Association, is given in the *British Medical Journal Supplement* (March 20). The scheme would enable patients to insure with their family doctor for continued medical care in the event of doctors withdrawing from the National Health Service. Married couples (male partner up to age sixty-five), unmarried males (20–65), and unmarried females (20–60), would each pay 2s. per head per week, other contributors sixpence per head per week. Gross income from an average list of 2,000 patients would be £6,991 8s. a year (£6,633 18s. if no charges were made to pensioners). Adult patients in rural areas would pay, it is suggested, an additional three-pence per week. The scheme does not cover supply of drugs, for "the provision of a pharmaceutical service is an entirely separate duty imposed on the Ministers by the National Health Service Acts." If, however, pharmaceutical services were withdrawn, the scheme "could easily be adjusted by the addition of a further modest premium" (about ninepence per patient per week, appliances being obtained through hospitals). Doctors who at present dispense for their patients present a special problem, to meet which alternative arrangements are being studied.

In a letter to the chairman of the doctors' negotiating committee on March 17, the Minister of Health (Mr.

K. Robinson) indicated his readiness to negotiate a new type of contract and new methods of remuneration within the framework of the "doctor charter" (see *C. & D.*, March 13, p. 252). He accepted the need to help doctors in providing finance for practice premises and said he was prepared to discuss the idea of a separate, publicly financed premises corporation. On levels of remuneration, however, the Minister insisted that the Review Body should be asked to advise. The levels proposed in the "charter" itself are estimated by advisers to the profession and the Minister to imply an increase in net remuneration (on the basis of unchanged expenses) of about £40½ millions over present rates, or an average of a little over £1,800 per doctor (about £1,570 more than the Review Body recommended).

The Association recommended to a conference of Local Medical Committees and its own representative body on March 24, after receiving the Minister's reply, that more time should be allowed to test the Government's intent. The British Medical Guild was therefore advised to hold members' resignations in its hands until June 30. Meanwhile the Minister would be asked to give "positive assurances" that he would set up a corporation to make finance available for ancillary help and agree to conditions under which the pricing of the contract would be referred to the Review Body.



## IN PARLIAMENT

THE bill that the Exchequer has to meet in 1965-66 on account of the abolition of the prescription charges is £25 millions. An extra £14 millions is also required by Executive Councils "for higher pay and prices" and £12 millions "for increased use of the services." A further £63 millions has been allocated for hospitals under the National Health Service "for continuing the expansion and improvement of the service"; of that, £49 millions is required for current and £14 millions for capital expenditure. Those details appear in Estimates 1965-66 (H.M. Stationery Office, price 8s. 6d.) presented to Parliament on March 19 by MR. N. MACDERMOTT (Financial Secretary).

### Branded Medicines in Europe

MR. A. WOODBURN asked the Minister of Health if he was aware of the directive on branded medicines issued by the Council of Ministers of the European Economic Community; and whether he proposed to associate Great Britain with the regulations to govern the control of branded drugs to secure uniformity of safeguards.

MR. C. LOUGHLIN (Parliamentary Secretary)—"Yes. The United Kingdom would not be affected unless this country became a member of the Community. The potential implications of the directive will, however, be borne in mind in the review of medicines legislation now in progress."

### Doctors' Remuneration

The estimated gross remuneration in 1965-66 from all official sources of family doctors under 70 who provide unrestricted general medical services under the National Health Service will average £4,600, MR. K. ROBINSON, Minister of Health, stated in a written answer on March 22. The amount included £220 for drugs and dispensing.

## COMPANY NEWS

Previous year's figures in parentheses

**YARDLEY & CO., LTD.**—The dividend for 1964 is maintained at 24 per cent., with a second interim of 18 per cent., but there is an additional 2½ per cent. from capital profits this time. Group profit was up from £1,882,051 to £2,048,012. After tax of £1,078,508 (£1,036,234) and minority interests £8,072 (£12,455), the 1964 net balance was £961,432 (£833,362).

**NORCROSS, LTD.**—The annual report of the holding company which owns, among others, Lantigen (England), Ltd., and S. Maw, Son & Sons, Ltd., mentions that trading results of Messrs. Lantigen in the year ended November 30, 1964, were satisfactory and that Messrs. Maw, Son & Sons made further progress in developing their brand image in the baby and nursery goods field. Sales and net profit increased substantially and earnings on capital employed also reached a new peak.

**COLEMAN & CO., LTD.**—A revaluation of the company's freehold properties shows a surplus of approximately £126,000 in excess of current book values. The board has therefore

decided to seek permission to issue to Ordinary shareholders one new ordinary £1 share for every two held. Turnover and estimated profits for the eleven months of the current financial year show encouraging increases over those of the corresponding period of the previous year, states the chairman (MR. D. S. A. McDougall).

**PHOTOPIA INTERNATIONAL, LTD.**—A one-for-five scrip issue is proposed. The interim dividend is raised from 4 per cent. to 5 per cent. on the present capital and a final of 12½ per cent. is forecast on the higher capital subject to the effect of Corporation Tax being not significantly different from that now envisaged. That would give a total for the year ending April 30, equal to 20 per cent. on the existing capital (compared with 17½ per cent.).

**B.D.H. GROUP, LTD.**—With a final dividend of 16 per cent. proposed, the total for 1964 is 20 per cent. (against 16 per cent.). Sales showed an increase of over £5.7 millions to £22.3 millions, and the profit rose from £728,703 to £1,374,375. After bank and loan interest £289,081 (£198,104), and tax, £449,886 (£277,184), the net profit is £635,408 (£253,415). Sir Geoffrey Eley is to resign from the chairmanship and from the board immediately after the annual meeting because of the growing pressure of his other commitments. Mr. D. L. M. Robertson will succeed Sir Geoffrey.

**GLAXO GROUP, LTD.**—Sales to external customers of the group increased to £33.7 millions in the half-year ended December 31, 1964 (against £30 millions) and profits, before tax, rose from £4,313,000 to £5,634,000. "This exceptionally favourable result" is attributed to the introduction of new products, sustained high level of technical efficiency, and a "very satisfactory" improvement in volume and profitability of overseas trading. The interim dividend is 6 per cent. (equivalent 5.6 per cent.), as forecast. After allowing for the increase in the standard rate of income tax to 8s. 3d., it is estimated that tax at home and overseas for the six months to December 31, 1963, will now absorb about 60 per cent. of the net profit before tax for that period.

**N.P.U. HOLDINGS, LTD.**—Allotments of shares have been made as follows:—Up to sixty, supplied in full; seventy to 150, seventy: 200-400, 100; 450-500, 200; 1,000-2,500, 400. The Chemists' Mutual Insurance received 20,000 as provided for in the prospectus. A large number of applications received after the closing date were not accepted.\* The board has adopted the following broad policy objectives: 1. To provide the economic basis essential to the survival of the independent professional pharmacist; 2. to acquire profitable financial interests generally in furtherance of the first object; 3. to aid consumers shopping at N.P.U. pharmacies by policies designed to improve efficiency in production, distribution and retail service; 4. to use the services of experts wherever necessary in all spheres of operation.

\*The names will be included in a list of those wishing to buy shares.

## BUSINESS CHANGES

MR. J. VEITCH, M.P.S., has acquired the pharmacy of Mr. W. Milne, M.P.S., at Lesmahagow, Lanarks.

MR. J. R. HAYTHORNTHWAITE, M.P.S., is taking over from Mr. W. A. Smith, M.P.S., on April 1, the business of Bate & Gorst, 23 Market Street, Lancaster.

MR. H. CROWTHER, M.P.S., has acquired the business known as Wilsons, Ltd., 709 Windmill Lane, Denton, Manchester, which will now be conducted as a pharmacy.

### Appointments

THE PROPRIETARY ASSOCIATION OF GREAT BRITAIN has appointed Mr. W. G. Hollis, M.P.S. Director of the association. Mr. J. P. Wells, M.P.S. (an assistant secretary since 1960) succeeds Mr. Hollis as secretary. Mr. H. W. Mayo retains the title of assistant secretary.

## PERSONALITIES

MR. W. MILNE, M.P.S., who has been in business in Lesmahagow, Lanarks, for thirty-eight years, has retired because of ill-health. Mr. Milne qualified from the Royal Technical College, Glasgow, in 1923 and worked on the retail side of the New Apothecaries Co., Ltd., Glasgow, before taking over the business in Lesmahagow which was previously to two doctors. The new owner, Mr. J. Veitch (see above) has assisted Mr. Milne for the past five years.



AT THE PALACE: Dr. Denis E. Wheeler with his wife and daughter at Buckingham Palace where on March 23 he received the C.B.E. (he was awarded to him in the New Year Honours). Dr. Wheeler is managing director of the Wellcome Foundation, Ltd.

## DEATHS

**BROWN.**—Suddenly, on March 12, Mr. N. C. Brown (managing director of N. C. Brown, Ltd., manufacturers of steel shelving), Eagle Steel Works, Heywood, Lancs.

**DAVIDSON.**—At Law Hospital, Carlisle, Lanarks, on March 2, Mr. James Davidson, M.P.S., 125 Gartsherrie Road, Coatbridge, Lanarks. Mr. Davidson qualified in 1921.

**REED.**—On March 8, Mr. Victor Reed, F.P.S., 1 Manor Park, London, S.E.13, aged seventy-six. Mr. Reed was an active member of the South-east Metropolitan Branch of the Pharmaceutical Society and a frequent attendee at the British Pharmaceutical Conference.



## NEW PRODUCTS AND PACKS

### PHARMACEUTICAL SPECIALITIES

**Acne Lotion.**—Upjohn, Ltd., Fleming Way, Crawley, Sussex, have launched a new speciality, Neo-Medrone acne lotion. The product, described as a new and specific treatment, is understood to have received wide acclaim from clinical investigators as an addition to current therapies. The pack holds 25 mils.

**Correction.**—Strengths of Sernylan parenteral, the new speciality of Parke, Davis & Co., Staines Road, Hounslow, Middlesex, to which attention was drawn last week, are 20 mgm./mil and 100 mgm./mil, and not as previously stated in the paragraph dealing with this product.

### COSMETICS AND TOILETRIES

**Sun-tan Cream.**—Thornton & Ross, Ltd., Linthwaite, Huddersfield, are issuing a new product Sunlan sun-tan cream, with "unique" captive cap on the tube, avoiding the possibility of the cap being lost from the tube whilst the product is in use.

**For Coloured Customers.**—Now available in the United Kingdom is *Tisane de Durbon* blood purifier, a product that is understood to be popular in West Africa and the West Indies. Orders and inquiries should be sent to James Hardcastle & Co., Ltd., 430 Edgware Road, London, W.2.

**Eye Make-up Remover.**—Lancome (England), Ltd., 14 Grosvenor Street, London, W.1, are marketing a new non-irritant eye make-up remover, Effacil, claimed to remove eye make-up completely, "giving time for eyelashes to breathe freely with no feeling of irritation and making them more receptive to further applications of eye-make-up with no risk of congestion."

### SUNDRIES

**One-way Under-nappy.**—The I. B. Kleinert Rubber Co., 91 New Bond Street, London, W.1, have produced a



new one-way under-nappy designed to go underneath the standard terry towelling nappy to keep the infant dry and so prevent nappy-rash. The product is

made from a soft, but strong, synthetic fibre (polypropylene) which does not absorb moisture. The under-nappy comes in one size only and is sold two in a pack. The display box measures approximately 11 x 8 x 4 in. and holds 2 doz. packs of two nappies, the pack measuring 5½ x 8 in. The colour theme of the display box is turquoise green, black and white.

**Antibacterial Spray.**—Geistlich Sons, Ltd., Melrose Avenue, Chester, offer in their new product Noxyflex spray band a "product which, in aerosol

form, presents the exceptional antibacterial properties of Noxyflex combined with the protection afforded by the copolymer vinyl pyrrolidone/vinyl acetate, which is permeable to gases and resistant to water but removable with soap and warm water." "Excellent clinical results" are reported when the product is used on infected burns, abrasions, bed sores, threatened bed sores, varicose ulcers, infective dermatitis, athletes' foot, excoriation colostomies, ileostomies, and the pre- and post-operative sterilisation of the skin, etc. Noxyflex spray band is packed in 4-oz. pressurised container.

## TRADE NOTES

**Discontinued.**—Parke Davis & Co., Staines Road, Hounslow, Middlesex, have discontinued issuing Parsetic 2 oz. Stocks are exhausted.

**Earlier Closing Time.**—Astra Hewlett, Ltd., King George's Avenue, Watford, Herts, advise that since March 22 their offices, warehouse and works have been closing at 5 p.m. instead of 5.30 p.m. as previously.

**Rheumatic Balm and Capsules.**—The 2-way rheumatic treatment of Dalmas, Ltd., Greenfield Factory, Steeley Lane, Chorley, Lancs, is a combined pack of a rheumatic balm and capsules. It is issued in 1-doz. display outer.

**Distribution Merger.**—The products of Warrick Bros., Ltd., and of Potter & Moore, Ltd., are now being distributed jointly by a newly registered organisation, P & M-Warrick, Seymour Road, London, E.10 (telephone: Leytonstone 3334).

**Change of Pack Size.**—Boehringer Ingelheim, Ltd., Isleworth House, Great West Road, Isleworth, announce that, as present stocks of the 10-mil pack of Alupent inhalant solution become exhausted, they are being replaced by a pack containing 7.5 mils. Dosage, etc., remains unchanged.

**Quantity Discounts.**—Medo-Chemicals, Ltd., 144 Fortress Road, London, N.W.5, announce that, since March 22, the following revised quantity discounts have been in operation:—Orders of £5 and over, 5 per cent.; £10 and over, 7½ per cent.; £20 and over, 10 per cent.; £30 and over, 12½ per cent.

**Again Available.**—Glaxo Laboratories, Ltd., Greenford, Middlesex, state that supplies of Quadrilin four-in-one vaccine for immunisation against diphtheria, tetanus, whooping cough and poliomyelitis, are again available and are expected to be adequate to meet future requirements.

**A New Small Size.**—To facilitate the use of their Thibenzole feed-pellets by the smaller farmer, the agricultural division of Merck Sharp & Dohme, Ltd., Hoddesden, Herts, have made the product available in a new 2½-lb. pack containing sufficient for treating five adult cattle or thirty-two ewes on a group basis. The 7-lb. pack continues to be available.

**Sole Selling Agents.**—The recent appointment of Chemist Brokers as selling agents to Rayette Beauty Products, Ltd., has now been extended to

cover an agreement whereby Chemist Brokers will, from April 1, act as sole selling agents for all consumer products from Messrs. Rayette.

**A Pack for the Smaller User.**—Burrroughs Wellcome & Co., 183 Euston Road, London, N.W.1, announce the introduction of a 50-mil pack of Covexin brand combined sheep vaccine. The pack contains ten primary (sensitising) doses or twenty-five maintenance doses and is designed for use by the smaller sheep farmer.

**Additional Sizes.**—CARLTON LABORATORIES (SOUTHERN), LTD., 2 Norfolk Square, Brighton, Sussex, state that "owing to a demand for a larger size than 100 of tabs. Feravol-F, they have introduced a pack of 250."—FISONS PHARMACEUTICALS, LTD., Loughborough, Leicestershire, state that a pack containing 120 Sanatogen selected multivitamins became available on March 17.

**Hot-water Bottle Range.**—William Freeman & Co., Ltd., Suba-Seal Works, Barnsley, Yorks, state that the prices of their Popular competition range of hot-water bottles are as follows and not as previously stated:—

1A50 Nos. 3 size, Suba Star (Suba-Seal stopper) 42s. doz.  
1A56 Nos. 3 size, Bara (Metaf Screw stopper) 42s. doz. (broken pack quantity 44s. 9d. doz.).  
1A55 Nos. 3 size, Suba Ray (Suba-Seal stopper) 44s. 3d. doz.  
1A73 Nos. 3 size, Bara Ray (metal screw stopper) 44s. 3d. doz. (broken pack quantity 47s. doz.).

**Clinical Thermometer Marking.**—In order to comply with international practice and the recommendations of the British Medical Association, and working in conjunction with the British Standards Institution, G. H. Zeal, Ltd., Lombard Road, London, S.W.19, propose to adopt 98.6° F. (37° C.) as the "normal" human temperature marking on clinical thermometers. That modification is being introduced during April. A revised British Standard specification, incorporating that amendment, is in the course of preparation.

### Bonus Offers

CROWN CHEMICAL CO., LTD., Lamberhurst, Kent, Colistol No. 1, 1 x 100-c.c. Vitamin B<sub>12</sub> injection with every doz. ordered, Until April 30.  
MAX FACTOR HOLLYWOOD AND LONDON (SALES), LTD., 16 Old Bond Street, London, W.1, Roll-on deodorant. Twenty-four invoiced as twenty-four. Spray deodorant. Forty-eight invoiced as forty-four, Till April 30.

## INFORMATION WANTED

The Editor would appreciate information about: Triple Lime



# Regional Conference in Bradford

## PIONEER EFFORT VOTED "AN UNQUESTIONED SUCCESS"

NOT far short of a hundred pharmacists braved snow and slush to attend, at Bradford on March 21, a first (and experimental) conference of members of branches of the Pharmaceutical Society. Most of them came from the West Riding of Yorkshire, but a few came from further afield (from Durham, from Gainsborough and Scunthorpe in Lincolnshire, even—the chairman (MR. H. STEINMAN)—by train across the snowbound Pennines).

On the agenda were three subjects—one commercial, one professional and one technical. MR. H. G. MOSS led off with a talk illustrated by slides on "Modernisation in Pharmacies." A summary of the address will be given next week. It prompted many questions and comments.

MR. W. W. HUDSON, Bradford, was glad the stress had been laid on making the premises look like a pharmacy, because sometimes the opposite comment was made. He asked for information about the effect of modernisation on staff and staff problems. The cost of new shopfronts was a headache, and the N.P.U. could help by producing designs that could be carried out by a local joiner. Even after modernisation, he stressed, personality remained important in pharmacy.

MR. G. H. WRIGHT, York, asked why "Prescriptions" had been preferred to "Dispensing" on the sign for the department, and MR. G. A. HUTTON, Doncaster, whether, in the N.P.U. scheme, the size of the dispensary had been reduced.

### Staff Enthusiasm

MR. MOSS replied that the staff should be taken into the confidence of the proprietor over any changes right from the start, shown what the result would look like, and told how it would lighten the work. Doing that had made his own staff enthusiastic: they had voluntarily worked overtime to smooth the final switch. He agreed that personality continued to count. That was another reason why some counters were still needed. The dispensary in the modernisation scheme had not in fact been reduced. It had been made longer but narrower.

MR. D. ROYCE, Pontefract, asked whether any distinction should be made between proprietaries and packed pharmaceuticals. He had brought about a 20 per cent. increase in sales of pharmaceuticals by putting them on show.

MR. MOSS replied that the question whether to display packed pharmaceuticals was to some extent a matter of controversy. For his own part he would err on the side of caution. The essential point was that the service or handling should be by an assistant.

MR. O. DUFFELEN, Scunthorpe, said that the reason that had been given for the drop in baby foods turnover was price-cutting. Other goods were now going from pharmacies for the same reason. Had the speaker any comment?

MR. MAXWELL GORDON, Leeds, stressed that the professional image

must be retained. Instead of putting pharmaceuticals on display, they could be shown behind the till, where they would be still under supervision. An "open" dispensary which he had installed was approved by all, including customers. His pharmacy was in an area of movement and not (like the pharmacy of the project) static, but he had by modernising been able to keep turnover, including dispensing turnover, rising while retaining the professional image.

MR. E. V. MAUDE, Bradford, said that he had carried out a partial modernisation which he had entered "in some doubt, because the display window had proved so profitable." In the end he had kept the shopfront the same but had carried out some refitting inside. He had aroused much interest among customers by doing it himself.

MR. H. CRAVEN, Durham, said that, though his own business did not lend

itself to modernisation (it was doomed to disappear), his turnover had increased by 12½ per cent. per year and he wondered whether the speaker would give the details of increases in such of his own shops as had not been modernised.

MR. MOSS replied that the collection of departmental information at the pharmacy had ceased: it was too time consuming. The baby department was being watched, and new methods had to some extent restored the situation. In the South-east of England the average increase in turnover in retail pharmacies had been given as 2.6 per cent. Among his own branches one about a mile away from the test shop had increased in turnover by exactly that figure and all followed much the same pattern, suggesting that modernisation was indeed the cause of the increase at the test shop.

(To be continued)

## Correspondence

Letters when received must bear the name and address of the sender, not necessarily for publication. The Editor does not hold himself responsible for the views expressed.

### A Classification of Drugs

SIR,—During the past six months the secretariat of the Committee on Safety of Drugs have developed, and are now using, a simple code for the classification of drugs as an integral part of their Register of Adverse Reactions to Drugs. This code is based on the therapeutic uses of various drugs but, to a limited degree, also takes account of pharmacological properties and chemical structure. It is not intended to be a substitute for the complex pharmacological and chemical codes which are being developed for research purposes by the Committee. The Committee would like to draw attention to the existence of this code and is prepared to supply copies to interested persons. Any correspondence should be addressed to:—

The Medical Assessor,  
Committee on Safety of Drugs,  
Queen Anne's Mansions,  
Queen Anne's Gate, London, S.W.1.  
D. A. CAHAL, M.D., Medical Assessor,  
London, S.W.1

### Unsettling

SIR,—I feel that I must air my grievance about the practice of an internationally known hair and beauty preparation house that gives 5 per cent. discount within seven days of invoice date, but does not dispatch the goods or invoice until the seven days have elapsed. That may well be due to internal reorganisation, but it seems to have happened too many times to me recently for it to be coincidental, and the mild protest I have already sent, with post-marked proofs, has so far passed unacknowledged. I would urge any company that purports to offer a settlement discount (and there are far too few of these) to at least date and stamp the invoice on the day that it is sent, thus giving the

customer a proper chance to qualify for his discount.

L. NEWELL,  
Westcliff-on-Sea

### Five-day Week

SIR,—The article entitled "Five-day Week" in this month's National Pharmaceutical Union *Pink Supplement* is the most reactionary statement I have read for some time. If carried out, its recommendations would put the clock back thirty years. The second paragraph should surely read "Quite obviously, retail pharmacies must . . . keep open only on five days a week." The alternative is obviously a pharmacist working ever longer hours to pay more staff to work ever shorter hours. The five-day shopping week, which will inevitably come, is being seriously retarded by certain groups, notably pharmacy, opposing it by this sort of rear-guard action. Pharmacy is well able to implement a 5-day shopping week now, by a simple extension of the rota system. The arrangements are straightforward, but the longer it is postponed, the more difficult it will become, as other businesses will revert piecemeal to 5½-day trading, having tried 5-day trading, and having found—because we were not closing—that it did not pay them to close.

C. R. THEWLIS,  
Middlesbrough

### Anonymous Order

SIR,—We have received an order posted at 4.30 p.m. on March 11 from a chemist in Aberdeen, Scotland, for Paton's nail hardener, but the chemist has not given his name or address.

F. C. PATON (SOUTHPORT), LTD.,  
1A Peets Lane, Southport, Lancs

### Appreciated

THANK you also for your excellent work in the C. & D. It always makes our week complete.—S.T.



# The CHEMIST AND DRUGGIST

For Retailer, Wholesaler and Manufacturer

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TELEPHONE: CENTRAL 6565

## A Step in the Right Direction

THE issue of ECL 24/65 (see p. 300), which informs Executive Councils that revised terms of remuneration and revised conditions to ensure an improved oxygen service have been agreed between the Central N.H.S. (Chemist Contractors) Committee and the Ministry of Health, will be welcomed by all those chemist contractors who undertake the supply of oxygen and oxygen-therapy equipment.

The new terms mark the end of negotiations that have been protracted and difficult. During the negotiations the Central N.H.S. Committee is understood to have had the advice of a subcommittee consisting entirely of pharmacists who handle oxygen and equipment. All contractors must thank the negotiators for the persistence and patience they have shown in the struggle to obtain fair and reasonable payment for that part of the pharmaceutical service.

All pharmacists who are concerned to enhance the status of their profession should consider the revised conditions, which have been agreed in order to ensure that an improved service is given to patients, as a step in the right direction. The conditions laid down for inclusion in the Executive Councils' list of contractors providing oxygen therapy services are not unreasonable. Indeed the majority of pharmacists who supply oxygen and equipment have for years been providing a service up to the standard demanded.

There will no doubt be disappointment that no greater increase has been made in the hire charges that are to be paid, but the payment of a professional fee and of delivery and collection allowances for supplying and collecting a set of equipment, and the delivery and collection allowances now payable on cylinders of oxygen, mean that the chemist will now receive payment for a service which in the past he has provided at a loss. For example, calculations show that a chemist who this month delivers and collects a set of equipment will receive, if the set is returned within seven days, a total of 10s., plus 1s. 5d. oncost in hire charges. For the same service next month the payment will be, if the patient lives within five miles of the pharmacy, a hire charge of 13s. plus 1s. 10d. oncost, a professional fee of 4s. 6d., a delivery allowance of 14s. 6d., a collection allowance of 5s., and a container allowance—a total of 39s. If the patient's home is over five miles from the pharmacy, the payment under the new terms would be 68s. 6d. For equipment on loan for four weeks, delivered and collected, the payments would be, in

March, 36s. 1d.; from April, 64s. 8d. where the patient's home is within five miles of the pharmacy, and 94s. 2d. where the patient's home is more than five miles from the pharmacy. The provision which the new terms contain for payment to be certified for additional masks required after the initial issue with the set removes a long-felt injustice, and the range of masks that is being added to the Drug Tariff should be another aid to the improved service aimed at.

The additional allowances payable where the set has to be delivered after normal closing hours indicate a solution, and one that should appeal to every pharmacist who has had to leave his fireside or bed to deliver urgently needed oxygen and equipment, of one problem that has been acute in the oxygen service. That delivery allowances for oxygen cylinders will be paid on the basis of one return journey for every three cylinders (or for the balance of an order) for multiple orders for cylinders on one EC10 form also shows a refreshingly realistic approach to the problems created by such orders.

The revised conditions will, no doubt, be unwelcome to a small minority of contractors supplying oxygen—those who in the past have not made deliveries or erected the equipment. If, however, chemist contractors are to receive fair and equitable payment for the oxygen service they give, the standard of that service must be high. The Executive Council's list of contractors providing the oxygen service is an "open" list. Any contractor who is prepared to comply with the revised conditions may be included in it. Alternatively, contractors who do not wish to undertake the supply of oxygen and equipment are under no contractual obligation to do so. The Drug Tariff provides for chemists not on the Executive Council list to refer orders for oxygen and equipment to a listed contractor.

Since the inception of the National Health Service in 1948, chemist contractors have been providing an oxygen service at considerable inconvenience, with little, if any, financial gain. The revised terms are not generous, but they are an improvement, and they do recognise some of the problems, previously ignored, that arise in providing this specialised service. Incidentally pharmacists who use their private cars to deliver cylinders of oxygen should ensure that their car insurance policy is not invalidated thereby.

## In the Picture

PHOTOGRAPHY continues its advance from being the pastime of a privileged minority into a leisure-time pursuit of the majority of the population. The change has come about for many reasons, but principally through increasing simplification in the means of making pictures. Automatic exposure control has been followed by easy film-loading, relieving beginners of an operation that has been a bugbear to many. The Kodak Instamatic cameras, which effected a great change in that situation, have been followed in the past twelve months by the Rapid system operated by a group of European manufacturers. It now remains only for some form of automatic focusing to be devised and the photographer will be fully free to concentrate his attention entirely on the composition of his picture. The simplifications already achieved have greatly increased the potential market for photographic apparatus and materials, for, of course, the elimina-



tion of technical worries has increased the proportion of successful pictures, and therefore of satisfied customers.

A device that has been increasingly incorporated in simple cameras in recent years is some form of flash-gun. At the same time electronic flash guns have been becoming smaller and less costly. To enable chemists to guide their customers in the correct use of flash we present in this issue (p. 313) essential background information on the subject.

Developments in the more expensive ranges of cameras continue. One of the more significant is the increasing use of zoom lenses, both in cine and in still cameras. Here again a brief survey is given of what is already a wide field. An article on adding sound to 8-mm. cine films introduces amateurs of cine to a refinement that is becoming more and more popular, and should increase dealers' turnover.

Where does the pharmacist stand in relation to all this? Admittedly a large capital expenditure would be needed were he to attempt to stock even a representative selection of all the apparatus and materials available today. But he continues to have his place. A year or two ago a journal for amateur photographers reported "We have ourselves tried six London dealers in one afternoon before eventually running a particular type of cassette to earth in a small chemist shop." People still tend to think of the chemist when they need something photographic. By keeping up his stock to a satisfactory level for maintaining a quick turnover, he will retain his reputation as friend of the photographic amateur, provided that at the same time he keeps himself up to date on developments and trends in the subject.

## Awaiting Synthesis

BY-PRODUCTS of reactions often turn out to be of greater value than the products that were the basic reason for bringing the reactants together. That could well be the outcome of the symposium on identification of drugs and poisons arranged by the Pharmaceutical Society and held in London on March 20 (see p. 323).

The participants on that occasion did not react violently. In quiet discussion doctors, biochemists, toxicologists and pharmacists each made their separate contribution. Some groups came in for criticism. The tendency, for example, for some doctors to prescribe unnecessarily large amounts of toxic drugs, often to persons not altogether stable in themselves, came under fire. To those who have been faced with the problem of identifying tablets, a suggestion that identification was not essential seemed shocking. That view, it later appeared, was not held by the majority. [The experience of the *C. & D.*, itself a pioneer in such matters, underlines the need for a system, and a revised *C. & D.* chart is at an advanced stage of preparation.] Despite strict time-keeping there was not enough time for adequate discussion at the session.

In congratulating the Pharmaceutical Society on having arranged the symposium we think they will have come to the conclusion that the gulf between the various groups was too wide to allow the assembly to arrive at an immediate understanding of one another's problems. That may be no reason for not renewing acquaintanceship at a later date, especially if some catalyst is present to promote the synthesis of a useful agreement. The concern over poisonings is urgent enough.

## Pharmaceutical Society of Northern Ireland MONTHLY MEETING OF COUNCIL

A PROPOSED plan to carry out a survey of all pharmacies in Northern Ireland was described by MR. J. KERR at the monthly meeting of the Council of the Pharmaceutical Society of Northern Ireland, held in Belfast on February 18. Mr. Kerr pointed out that that would not be finally decided until the next meeting of the Future of Pharmacy Committee, but he would like to be able to tell the members "that the finance was all right." He reminded the meeting that, with two other members of the Committee, he had been delegated to look into the economics of pharmacy. He had written to the director of the Institute of Pharmacy Management, who were prepared to do a statistical survey of all pharmacies in Northern Ireland, he reported. Among the facts asked for would be the gross and net profits, and the number of staff employed. "This would give a complete picture of the economic state of pharmacy," said Mr. Kerr.

The president (MR. N. C. COOPER) commented that he was impressed by the Future of Pharmacy Committee; he thought the proposed lines of study were very interesting. There would be a preliminary report in the near future. The Council granted the Committee a sum of £100.

A letter of resignation was received from Mr. W. P. Ewart, Scotch Street, Armagh, who, the members were told, had not been well. In his letter Mr. Ewart pointed out that he had been a member of the Council for a considerable number of years, and during that time he had made many friends, but recently he had found it impossible to attend the meetings. MR. W. C. TATE suggested that they should write to Mr. Ewart regretting

his suggestion, and asking him to let the matter rest a month or two to see if his health might be restored. The members of the Council agreed to this.

The PRESIDENT commented: "He would be a great loss to this Council for he has contributed to it for over eighteen years. He has been a tremendous help to the work of the Society."

MR. W. T. HUNTER reported on the Ethical Committee's deliberations on a scale of fees for dispensing private prescriptions. It was agreed that their proposals should be considered by the Future of Pharmacy Committee who would then report to the Council.

A letter was read from a Miss Lillian Jones, formerly resident in Warrenpoint, who stated that she had gone to live in England, and had allowed her name to lapse from the register. She was now leaving for Australia and wished to have her name restored. The Council agreed to this request.

The Council considered a letter from the secretary of the Society of Pharmaceutical Students, Mr. J. N. Paisley, pointing out that last year the Council had given a grant towards an educational trip to London. The Council agreed to give a similar grant for a party of twenty students to visit London this year.

In addition to the president (Mr. N. C. Cooper) there were present Messrs. A. T. Hardy, W. H. Boyd, R. J. Davidson, B. Flatley, J. Gordon, W. T. Hunter, J. Kerr, G. E. McIlhagger, D. Moore, J. Paul, W. C. Tate, A. Templeton, R. M. Watson. Apologies for absence were received from Messrs. H. G. Campbell, W. Donaldson, W. P. Ewart, H. W. Gamble and Dr. R. G. R. Bacon.



At one time the besetting sin of amateur cine film makers was uncontrolled panning. Everybody knows the sort of thing: "This is a shot taken half way up the Matterhorn" (swift swirl of colour before a bewildered audience's eyes) . . . "and this is the same view a little higher up the mountain" (even faster sweep across the screen, this time in the opposite direction). Then someone invented an even more eye-straining weapon for the home movie enthusiast—the zoom lens. Not only could the camera be swung like a hosepipe, but the subject could be made to charge towards the audience and, at the moment that disaster seemed imminent, rush away to its rightful position in the background. History has not recorded who discovered that rapid panning and ultra-fast zooming could be combined, but the gentleman does have his full quota of disciples.

A little exaggerated, perhaps, that picture may be, but anyone who has sat through a home movie show knows that the faults are common ones, and, moreover, the very ones that tend to deter the would-be cine user and discourage the movie-maker himself from purchasing many rolls of film. Yet sales of cine equipment continue to rise, and by far the largest demand is for cameras with a zoom lens—equipment potentially destructive of good amateur film-making.

### Maid of All Cine Work

Used correctly, the zoom lens is a valuable and efficient tool. The earliest zoom lenses were bulky and designed to replace the standard camera lens. Except for the most costly, their resolving power was poor compared with that of good-quality lenses having a single focal length. Then one or two of the more forward-looking manufacturers decided to reduce the size of the zoom lens and build it into the camera. Suddenly, from being a piece of equipment for special effects, the zoom lens became the universally accepted "maid of all (cine) work."

My opening remarks suggested how the zoom lens can be misused. Why is it built into the camera, then, should it be used, and if so how? To those questions the man behind the photographic counter can, with a little guidance, help his zoom camera customer to find the answers.

Main use of the zoom lens is to compose the picture exactly, without requiring the cameraman to move from a given position. In other words the zoom lens provides the user with an infinite number of focal lengths between its two extremes. With the triple-turret camera—virtually a thing of the past since the 1962 "boom in zoom"—the user is restricted to three focal lengths—the "standard" lens of ap-

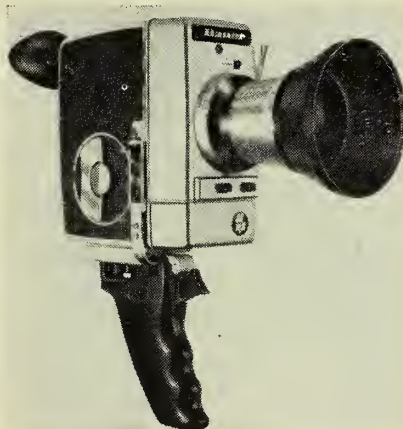
## C & D PHOTOGRAPHIC ISSUE 1965

# ZOOMING SUCCESS

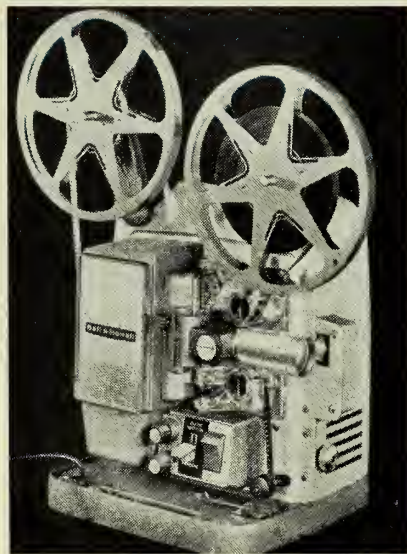
## A BRIEF LOOK AT ZOOM LENSES—WHAT THEY DO, THEIR FEATURES AND HOW TO USE THEM

proximately 12.5 mm., the "wide angle" of about 6.5 mm., and the "telephoto" of about 36 mm. Most zoom lens cameras have a wide-angle limit of about 9 mm. (not quite a true wide-angle lens, but useful) and a telephoto limit of 30 mm. (once again, something of a compromise, but certainly the longest focal length that can be employed on a "hand held" camera without unsteadiness becoming apparent).

A good example of a 9-30 mm. lens camera is the Bell & Howell model 315 zoom reflex (Rank). There are cameras with far wider zooming ranges: the Bauer 88RS (Pullin) has an 8-48 mm. Schneider Variogon and the Carena Zoomex-S (Photopia) has a 6.5-



Powered zooming from 8 to 48 mm. is featured in the Bauer 88RS 8-mm. cine camera. Reflex viewfinding is another refinement (Pullin).



Bell & Howell Autoload II 8-mm. cine projector with Filmovara zoom lens having a range of focal lengths 17 to 27 mm. (Rank).

52 mm. lens. With those cameras a tripod becomes essential for steady handling at the telephoto end of the range.

Special care should be taken in focusing zoom lenses, especially at the longer focal lengths. Most zoom lenses have a means of focusing; some rely on a scale on the lens mount, some on a ground-glass screen and others on a range-finder in the view-finder. A few cameras—the Bell & Howell 418 (Rank) is one—cater for the beginner by incorporat-



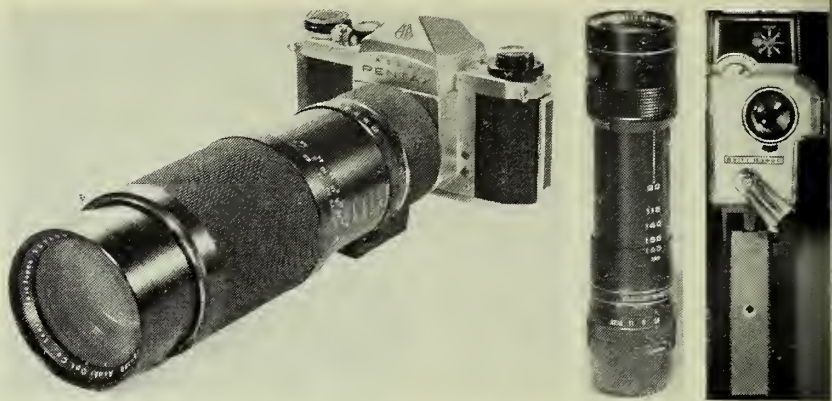
ing a "universal focus" position causing everything from about 8 ft. to infinity to be sharp at any of the focal lengths (in brightly lit conditions).

One of the most useful features to be incorporated in zoom lens cameras is the reflex view-finder. Manufacturers, in designing a relatively complicated zoom lens, have gone that little bit further and incorporated in most models this undoubtedly superior form of view-finder. Parallax is avoided and the user sees exactly what is being recorded on the film (well, almost exactly, for most reflex view-finders show slightly less than is recorded). A small percentage of zoom cameras have a mechanically linked lens and optical view-finder—a compromise between low cost and convenience.

### Latest Feature

One of the latest features to be incorporated in the more expensive zoom lens cameras is "through-the-lens" exposure control. As its name suggests, the system measures exactly the amount of light passing through the lens, irrespective of the focal-length setting. Thus there can be the certainty that the exposure settings for a wide-angle shot of, say, a building, and a telephoto view of a shaded doorway in that scene, will be exactly correct when both are taken from the same position. Amongst the cameras to feature the refinement are the Bauer 88RS, the Bell & Howell 418 (Rank), the Bolex K2 (Cinex) and the Camex reflex CR8 (A & I). One could hardly deny that there is something fascinating about the view through a zoom lens when it is operated. That is the reason, of course, why so many amateur movie-makers are entrapped into abusing its use. Without going into film-making techniques, one may generalise by saying that even the simplest family or holiday film demands only one or two zoom shots. The rule is "as few as possible."

When the zoom shot is made, it may be fast or slow. Usually the fast zoom is for dramatic effect, the slow to point out something interesting within a scene. Here again some manufacturers have realised that, in the interests of better results, there are advantages in mechanising the zoom control. Most cameras employ a manually operated lever, but a few boast push-button zooming powered either from a battery or the spring drive. Another form of power zooming is to be seen in the Eumig add-on power handgrip for certain of their models. A new addition to the Bell & Howell range, the model 316 (Rank), combines a well placed finger-tip zoom lever and a built-in pistol grip—both designed to keep the zooming action under perfect control and the camera steady. The forecast may be made that within the next two years, almost every zoom-lens camera will have powered



Left: Asahi Pentax fitted with zoom Takumar  $f/4.5$  lens, 70 to 150 mm. (not yet available in the United Kingdom) (Rank). Centre: Yashinon-R zoom lens  $f/5.8$  for Yashica single-lens reflex cameras has range 90 to 190 mm. (Photax). Right: Bell & Howell zoom reflex de luxe cine camera with finger-tip zoom control linked to  $f/1.8$  9 to 29-mm. lens (Rank).

zoom or some form of geared finger-tip control. If it is not part of the zoom camera's basic design, the pistol grip is a valuable accessory, the purchase of which should be encouraged when the camera is being sold or demonstrated.

So far, the remarks made have referred to 8-mm. cine cameras. Most popular projectors today are fitted with zoom lenses that enable the picture to be fitted into the screen area without tiresome juggling. Projection-lens focal lengths have average ranges of 15-20 mm. and 15-25 mm., but there are also some wide-range lenses, such as the 12.5-25-mm. on the Bolex 18-5 zoom (Cinex), and the 13-25-mm. on the Eumig Mark-S (J of H). In general their performance is good, but it can be a little disappointing at the shortest focal lengths, especially on the least expensive projectors. Some zoom lenses are made for professional users. Results produced on these models (such as the Rank Taylor Hobson Varotal series) can be seen in 16-mm. and professional cinema films and during television outside broadcasts. Here again, when used well, the "zoom" feature is carefully controlled and sparingly employed.

### Zoom in "Still" Cameras

Zoom lenses have also made an appearance in the "still" camera field, providing the single-lens-reflex camera user with a range of focal lengths and eliminating the need to change lenses. That facility can be of use to the fast-working news photographer, or the enthusiast limited to a single viewpoint at, say, a sports-car meeting. The original "still" camera zoom lens on the market was the Voigtlander Zoomar 36-82-mm.  $f/2.8$  for the Bessamatic and Ultramatic cameras (J. of H). An equally useful range of focal lengths on either side of the standard 50-mm. focal length for 35-mm. cameras is provided by the Nikkorex zoom 35 (Pullin) the world's first single-lens-reflex with a built-in zoom lens (the Nikkor Auto 43-86-mm.  $f/3.5$ ). The Nikon (Pullin)

owner has a choice of three Nikkor auto lenses, 43-86-mm., 85-250-mm., and 200-600-mm. Users of other single-lens-reflex cameras have an equally wide choice from such manufacturers as Yashica (Photax), Minolta (Rokkor) (JCL), Canon and Enna (Silber). In Japan, the Asahi Optical Co. have announced a zoom lens for their Pentax (Rank) series of 35-mm. single-lens reflexes. With the introduction of the Pen F 35-mm. half-frame single-lens reflex (Pullin), even more interest has been generated in this economical format, and Olympus Optical have produced the Zuiko auto zoom 50-90-mm.  $f/3.5$  as one of the camera's interchangeable lenses.

Primarily, still-camera zoom lenses are designed to provide an infinite number of focal lengths between the stated limits, but photographers have taken a leaf from the movie-maker's book by operating the zoom whilst firing the shutter. They have achieved some fantastic results. High-quality zoom lenses for still cameras are relatively costly to produce and at present their sales are low. It will be interesting to see if the success of their cine counterparts will be repeated.

### KEY TO DISTRIBUTORS

- A & I = APPARATUS AND INSTRUMENT CO., LTD., Aico House, 36 Grove Road, Hounslow, Middlesex.
- Cinex = CINEX, LTD., Bolex House, Burleigh Gardens, London, N.14.
- JCL = JAPANESE CAMERAS, LTD., 50 Piccadilly, Tunstall, Stoke-on-Trent, Staffs.
- J of H = JOHNSONS OF HENDON, LTD., Hendon Way, London, N.W.4.
- Photax = PHOTAX (LONDON), LTD., 70 Charlotte Street, London, W.1.
- Photopia = PHOTOPIA, LTD., Hempstalls Lane, Newcastle, Staffs.
- Pullin = PULLIN PHOTOGRAPHIC, 11 Aintree Road, Perivale, Greenford, Middlesex.
- Rank = RANK PHOTOGRAPHIC, Photographic House, Aintree Road, Perivale, Greenford, Middlesex.
- Silber = J. J. SILBER, LTD., 11 Northburgh Street, London, E.C.1.



# Prints from Transparencies

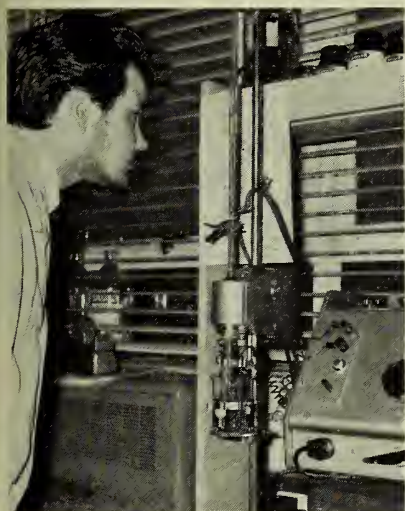
## SERVICES FROM A NEW PROCESSING STATION

**E**ACH year literally millions of colour transparencies are produced by the ever-increasing number of amateur photographers in Britain. Holidays, parties, weddings—all those occasions call for a record in colour, and the process-paid transparency film, with its quick return of positives ready for projection or viewing, is rapidly ousting black-and-white film.

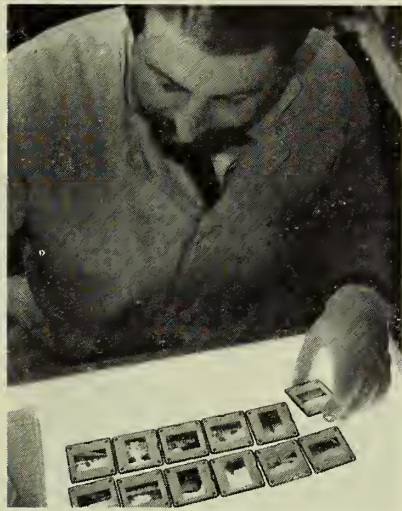
After seeing their pictures in colour, either in an illuminated viewer or by projection, people almost invariably ask to have prints for sending to rela-

sing station at Wimbledon a complete department has been set up to offer to the public (via retailers) a print-from-transparency service that will do justice to the clarity and saturation of colours in the original transparency. Unlike systems using intermediate negatives, in which both resolution and colour suffer, the Agfa CT-copy system uses a direct reversal colour paper that accurately reproduces the full quality of the transparency. The original transparency is in no way affected by the printing process.

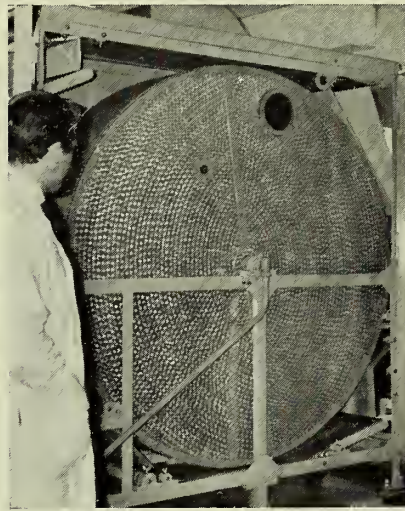
sure that they agree, and then passed for colour grading. A technician marks the envelope with filtering instructions to correct subtle variations in colour balance due to lighting conditions at the time of exposure, as well as minor adjustments needed to match the colour paper to transparencies of various manufacturers. Colormator printers evolved by the Agfa equipment factory in Munich, West Germany, are used for the work and, since the paper is contained in light-proof chambers, the operator can work in normal room



A fully equipped analytical laboratory keeps a continuous check on the solutions used in the processing of CT prints.



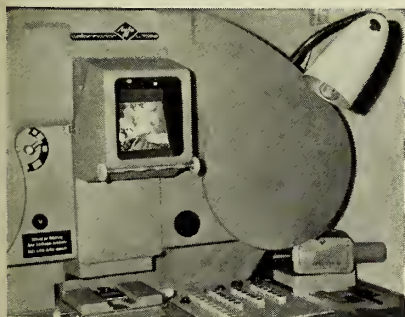
Prior to printing, transparencies are examined by an experienced colour grader who allocates the appropriate filtration necessary to achieve the best results.



Glazing of prints is a continuous process on this giant glazing drum.

tives or to carry around in a wallet or handbag, and the demand provides worth-while additional business that can be as profitable in the winter as in the height of the season.

At the recently erected Agfa proces-



Colormator printers from the Agfa factory at Munich can print up to 700 prints on a continuous roll of colour paper, and are operated in normal room lighting. They feature fully automatic paper transport, exposure and filtration corrections selected by the operator.

The company provides the usual order pads, transparency envelopes, mailing bags and addressed labels for forwarding the work to Wimbledon, and in the London area there is also a daily van collection and delivery service. Any make of transparency may be accepted for printing, and any format except  $2\frac{1}{4} \times 3\frac{1}{4}$  in. (eight on 120) and  $1\frac{5}{8} \times 2\frac{1}{4}$  in. (sixteen on 120). Depending on the format, the resulting prints will either be  $3\frac{1}{2} \times 3\frac{1}{2}$  in. or  $3\frac{1}{2} \times 5$  in., both sizes retailing at 2s. 9d. each. Each order is returned to the retailer with the order docket showing the retail price. On the monthly statement the total retail value of work completed is subject to a discount of  $33\frac{1}{3}$  per cent., plus a further  $2\frac{1}{2}$  per cent. for monthly cash settlement. Minimum order accepted is for four prints, which may be made up from any number of transparencies.

On receipt of the order at the processing station, the transparencies are directed with the order docket to en-

lighting. Agfacolor reversal print paper is of the conventional tri-pack construction exposed by the additive filtering technique with white borders obtained by edge fogging during printing. A press-button control panel (keyed to the instructions given by the colour grader) and automatic paper transport by foot switch make for rapid output. Only during grading and the actual moment of printing is the slide outside its protective envelope.

Each machine has a capacity for a 250-ft. reel of paper (enough for between 600 and 700 prints) which is processed in a complete length, first through a colour developer, followed by re-exposure to fluorescent tubes in a water bath. The paper then passes to colour developer, in which the colour dyes are formed, then to a bleaching bath and finally through a fixing solution. The paper processor is equipped with automatic nitrogen-burst agitation and solution replenishment. The processing solutions are constantly





Processed colour prints emerging from the continuous processing and glazing machines are being reeled prior to trimming.



Colour prints are trimmed on the Cutomat automatic trimmer and a sensing mark, applied to the paper border during printing, operates an automatic guillotine and enables a 500-ft. roll of paper to be trimmed in four minutes.



Monthly statements for work supplied to retailers are prepared in the accounting department. Each print order is returned with the original dealer docket, the total value of the order being shown as a retail price.



The completed order is returned in an attractive print wallet safely packed in a crush-proof mailing carton.

checked by the control laboratory against standard test strips supplied by the German parent company. The prints pass on for glazing on a 10-ft.-high rotary dryer. The glazed roll of prints is once again examined by quality control before being cut into individual prints. Even here automation takes over. During printing the Colormator machine has placed a graphite sensing

mark in the border between each picture. The mark trips the cutting mechanism of an automatic machine that transports, trims and stacks a complete 250-ft. roll of prints in 4 minutes. Finally the transparencies and matching prints are linked together and booked out for delivery.

## NOTES FOR DEALERS AND FINISHERS

**"Charter" for Dealers.**—A "dealer charter" covering products, distribution, prices, advertising, representation, replacements and guarantees has been sent to its customers by Photopia International, Ltd., Newcastle, Staffs.

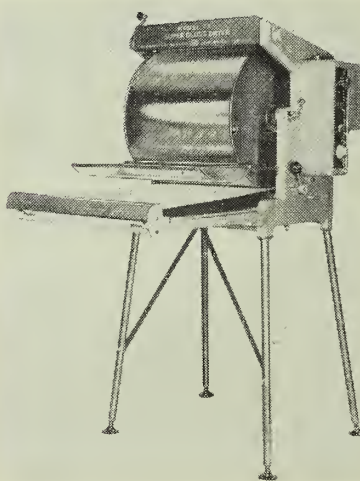
**New Dryer for Photo-finishers.** — Johnsons of Hendon, Ltd., have introduced the Johnson super gloss dryer, model 75, a stream-lined version of the model 35. The specification includes an enclosed motor, gearbox and controls, making the entire width of chromed drum available for glazing or drying.

handle and Simmerstat heat control are provided. Speed is set by a dial control. There is an indicator lamp on the mains connection with a cartridge fuse. Diameter of the drum is 17 in., width 16½ in. Voltage range is 200-50 volts, and current consumption 1,000 watts. The dryer is distributed by the photo finishing department of Johnsons of Hendon, Ltd., 970 North Circular Road, London, N.W.2.

**Dealers' Credit Plan.**—Kodak, Ltd., Kodak House, Kingsway, London, W.C.2, and Tricity Finance Corporation (a member of the Lombard Banking Group), announce a plan to aid dealers develop hire purchase and credit sales of amateur photographic equipment. Two separate facilities are provided:—credit sales and hire purchase. The former is intended for items costing up to a maximum of £30, with repayments by eight monthly instalments. The charge to the dealer for this service is 8½ per cent. and, it is believed, will most benefit those dealers who can build up their blocks of transactions, value around £75, within six or seven weeks. The plan can also be used for other items and it is suggested that this latitude should help photochemists increase sales of, for instance, electrical appliances. In the second part of the plan, designed for equipment costing £30 and over, Tricity Finance Corporation would finance each transaction and the agreements would be between the Corporation and the customer. Additional services include an allowance to dealers towards the cost of obtaining customer status reports, an allowance on each agreement and customer insurance coverage.



A daily collection and delivery service operates for the convenience of retailers in the central London area.



The conveyor band has reinforced edges to ensure accurate alignment with the drum, and a manual drive



THE year 1964 was a record one for photographic sales—and early indications are that 1965 will be even better. More and more people can afford an increasing amount of “fun-money”—and have more leisure in which to spend it. Picture-taking is becoming a natural concomitant not only of holidays but of almost every leisure activity. At the same time advances have made photography easier, more exciting and more rewarding. With today's colour films, for example, the veriest beginner can get excellent results using the simplest of cameras. Loading and unloading—bugbears of the snapshotter—have been reduced to fool-proof simplicity in the Kodak Instamatic and Agfa Rapid cameras. Home movies in colour are now “snapshot easy.” Every year photography is becoming more and more the habit of millions rather than the hobby of the few.

The question that every photographic-dealing chemist should put to himself, therefore, is “Am I getting my full share of this burgeoning market? Am I making full tactical use of my advantages to compete with the ‘big battalions’?”

Any display should be as striking and eye-catching as it can be made. If the photographic window does not make an immediate visual impact on the passer-by, compelling him to stop and look closer, it cannot even start to do its job. Bold use of colour can help. Cover the floor and back of windows with paper or felt in bright, clear colours. As a rule it is unwise to use more than two colours together. A glance at smart fashion store displays will show what colours are “in” at the moment. Movement in a display is also of great “stopping” value. Research has shown that any window with movement in it gains 80 per cent. more attention than the same window “static.” Small electric animating units are cheap, and their running costs are low. Hanging streamers rippled by a small concealed fan are another simple means of getting motion into a display.

Photographs are an essential part of any photographic window display. Pictures are what people want, the reason they buy cameras and films. Thus it is only logical that pictures should figure prominently in the window display. They do a threefold job, helping to create the all-important initial attention,

stimulating photographic interest, and saying, in effect: “You get pictures like these with the equipment shown here.”

Photographs should be used as an integral part of the design, preferably linked strongly with the equipment rather than as background or general decoration. It is essential to make sure that the pictures are not obscured by bulky equipment. Naturally, they should be seasonable and topical—and they will have added interest value if they have a local flavour. But a word of warning. Remember that colour prints are affected by strong constant sunlight. So they should be placed where they do not catch direct sunlight—and changed at the first sign of fading.

#### A FEW DO'S AND DON'TS

DO change your displays fairly frequently.

DO try to work to a basic theme.

DO keep your windows lit after hours if possible.

DON'T be content to show rows and rows of cameras only.

DON'T forget to ask yourself “Does my display A.I.D. sales?”

## More profit from your photo counter

IN THE COMING SUMMER SEASON AND AFTER

One thing is certain. It is no longer enough merely to stock and retail photographic items to meet customers' demands. To get the full profitability from one's photo counter it is imperative to promote and stimulate customers' demands, to remind them in every way possible that picture-taking is exciting and rewarding—not only in the summer but all the year round.

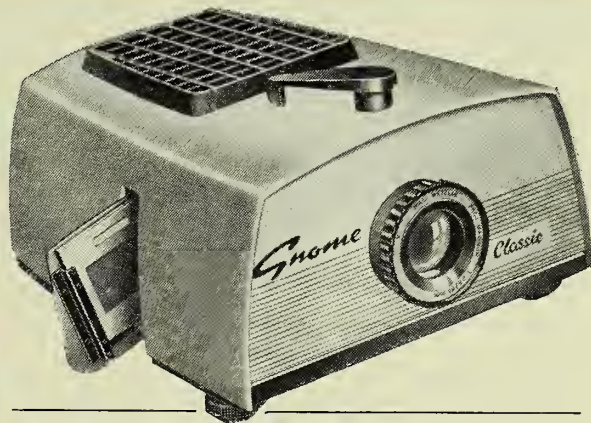
A pharmacist has unique advantages. Much more than the purely photographic dealer, he has a golden opportunity to win over the average “non-photographic” people—in fact any one who comes into the shop for prescriptions, cosmetics, sunglasses or any of a thousand-and-one other items a chemist supplies.

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# Flash... Electronic and otherwise

**I**N a most appropriate setting (the magnificent lecture hall of the Institute of Electrical Engineers' headquarters, Savoy Place, London), the Royal Photographic Society of Great Britain bestowed on Professor Harold E. Edgerton, B.S., M.S., D.Sc., on February 2, at the opening of his lecture-demonstration to members of the Society its highest honour, the Silver Progress medal.

Dr. Edgerton is professor of electrical measurement, in the department of electrical engineering, Massachusetts Institute of Technology, Cambridge, Mass., U.S.A. He and his collaborators



Prof. Edgerton, "father of electronic flash" (right), receives the Royal Photographic Society's Silver Progress Medal, its highest honour, from the R.P.S. president, Mr. H. D. J. Cole.

[Photo: J. A. R. Adams, A.R.P.S.]

have contributed widely to electrical technology, but the sphere of particular interest to the Royal Photographic Society has been his work in developing electronic flashlight equipment, and it was for that work that the Progress medal and Honorary Fellowship were bestowed.

Professor Edgerton has been described as the "father" of electronic flash. He disdains the term "inventor." "God," he says, "invented it; I just put lightning into a bottle. Fortunately it comes out at the right colour temperature for daylight colour film." An important part of his work was evolving apparatus to produce a succession of short-duration flashes of light to enable high-speed events to be studied by producing a stroboscopic effect. Presumably that is the reason for the term "strobe light" being used by the Americans for the single flashes applied to normal photography. The use of the term is to be deprecated except when applied to repetitive discharge equipment.

Many facilities enjoyed today represent the fulfilment of ideas that occurred many years ago, but which had

to languish until techniques had been evolved to render them exploitable. Flying, magnetic recording of sound, lens coating and electronic flash are among them. Henry Fox Talbot, photographic pioneer, patented a system of spark photography as far back as 1851. He built up a store of electrical energy in a Leyden jar (an early form of capacitor) and discharged it across an air gap to produce a brief pulse of highly actinic light. His classic experiment was to affix a sheet of *The Times* to a disc rotating at speed and to photograph it, while it was spinning, by the light of the spark from his apparatus. The shortness of the duration of the spark "froze" the motion so that, on the resulting photograph, the print was legible.

## Too Early to Exploit

But Talbot's equipment must have been cumbersome, and it failed to become a commercially practicable proposition. So the idea passed into limbo to await suitable sources of power and methods of controlling the instant of discharge. It had, in fact, to wait for the development of electronics.

Experiments involving the discharge of capacitors through tubes containing air under reduced pressure were being conducted at the Royal Institution as early as 1821, and later the high-tension voltage was derived from a spark coil—a step-up transformer—by Plücker, for whom Geissler made the tubes which bore his name. Plücker found that various gases under reduced pressure produced a variety of coloured discharges.

Investigations by Raleigh, Ramsay and Travers, leading to the discovery and isolation of the "noble" gases helium, neon, argon, krypton and xenon, were followed by experiments which established that those gases are readily ionised and are better conductors when used in discharge tubes. They have the additional advantage of being chemically inert.

By 1910 high-tension discharges through those gases were being used for advertising signs, and a further impetus was given to research into discharge-tube design, but it appears that no one, until Edgerton did so in the 1930's, recognised the potentialities of discharge tubes in photographic practice.

By 1939 the equipment had emerged from the laboratory and was ready for commercial application. Many readers will remember the photographs

of the beautiful coronet effects produced by drops of milk falling into a saucer of milk, of the "frozen" action of golfers swinging, of the deformation of tennis balls on the racquet, humming birds in flight and other remarkable pictures that were released in 1939.

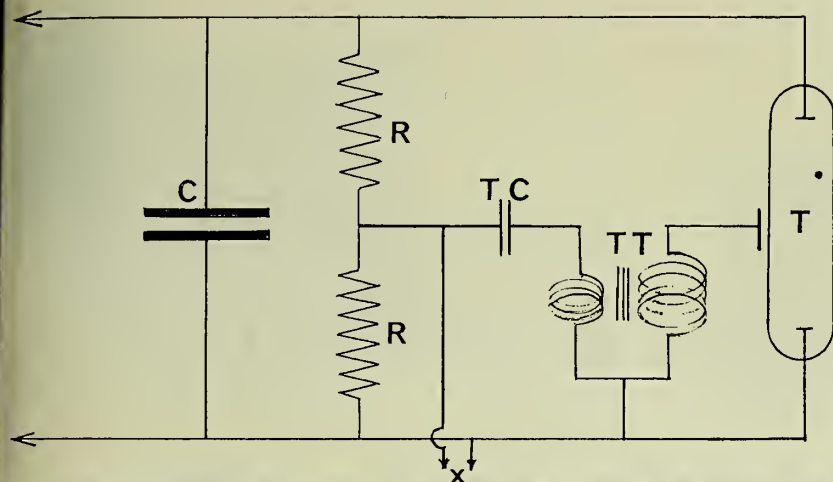
But during the 1939-45 war electronic flash was developed exclusively for military applications, and civilian photographers had to wait until 1946 for a chance to use it. Those early units were heavy and cumbersome. Units described as "portable" had power packs measuring up to 11 x 11 x 6 in. and containing a lead-acid accumulator, a voltage step-up system employing an electro-mechanical vibrator, and large paper dielectric capacitors. It may be significant that the weights were not quoted in contemporary advertisements; prices were in the region of £60, and flash durations around 1/3000 sec. One reference has been found for a unit having a duration of 1/10,000 sec.

A parallel development was that of large, powerful installations for studios. The flash heads have incandescent lamps, known as modelling lights, within the helical discharge tubes enabling the heads to be placed so as to indicate the lighting of the subject. Some extension heads have photocell devices to trigger them from the flash of other tubes in the set-up, in that way dispensing with extension trigger leads. Such installations are beyond the scope of this article.

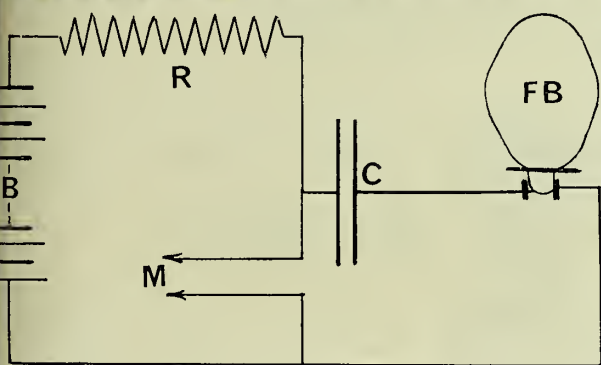
## Essentials of Electronic Flash

Electronic flash is produced by the discharge of a heavy current through the tube in a very short time—1/500 sec. or less. The energy required is derived from a capacitor that has to be charged by a source of unidirectional electricity. Low-voltage units may be charged directly from banks of cells in series to deliver a suitable voltage. At one time there were units employing hearing-aid batteries or radio high-tension batteries to feed capacitors up to 270 volts. Hearing-aid batteries enabled small units to be produced but limited the amount of energy that could be stored. The larger batteries supplied a greater amount of power but added to the weight and bulk of the power pack. Furthermore, the life of dry batteries, even if not used, is short, and the units employing them were costly to operate, particularly if required only at infrequent intervals.

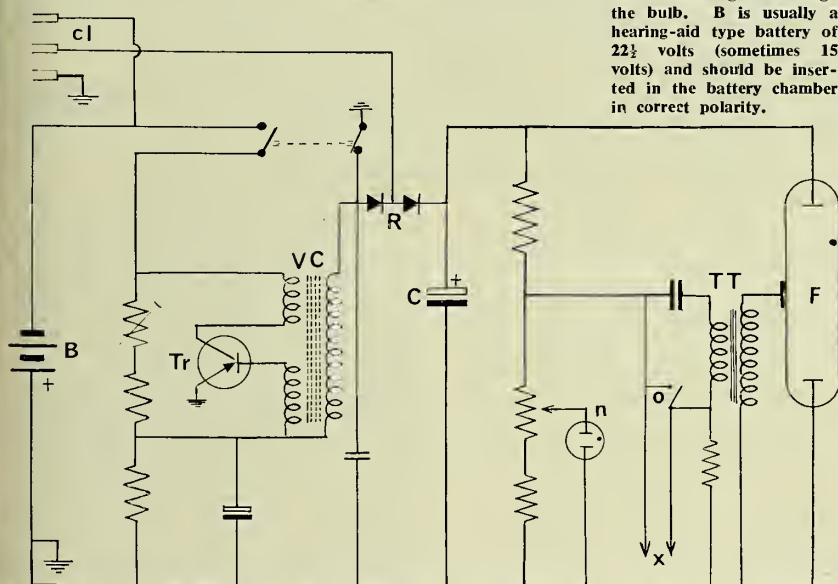




Basic storage and discharge circuit. Capacitor C is charged from a source of unidirectional current (rectified a/c from the mains, high-tension batteries, or low-tension sources through a step-up and rectifying system). The voltage across discharge-tube T is equal to that across the capacitor, but not sufficiently high to break down the resistance of the gas in the tube. Discharge is initiated by applying a pulse of high voltage to the external (triggering) electrode of the tube. That is effected by charging the triggering capacitor TC through resistors RR. When the triggering circuit is closed at X (normally the shutter contacts), TC is discharged through the primary winding of the step-up transformer TT, whose secondary delivers the pulse to the triggering electrode. In high-powered installations a thyatron valve is included in the triggering circuit to avoid having to impose high voltages on the shutter contacts.



Although flash-bulbs may be fired directly by dry cells, it is more usual to use a battery-capacitor circuit. That avoids failures due to internal resistance of the battery cells. Battery B is connected to the capacitor C through a limiting resistor R, which reduces the drain on the battery and also prevents a direct "short" of the battery across the contacts in the shutter. FB is the flash-bulb which completes the capacitor charging circuit. When the firing circuit is closed across M the capacitor discharges through the bulb. B is usually a hearing-aid type battery of 22½ volts (sometimes 15 volts) and should be inserted in the battery chamber in correct polarity.



**BASIC TRANSISTORISED ELECTRONIC FLASH UNIT.** Battery B feeds the circuit containing transistor Tr to produce a pulsating current through the primary windings of voltage-changing transformer VC. The high-voltage output from the secondary is rectified by rectifier R and passed to capacitor C. To the right of the capacitor will be recognised the triggering circuit shown in Fig. 1 but with the addition of the circuit feeding the neon "ready" light N. Another refinement shown is O, the "open flash" button. Also shown is the input for the charging lead cl switched in by the double-pole switch (shown in the "charge" position). More elaborate units have a second transistor that makes Tr non-conducting when the capacitor is charged, thus conserving battery life.

Perhaps a better way—and the way that was used in the first portable units—is to use a low-voltage source of power such as a rechargeable accumulator in conjunction with a voltage-raising device. To step up voltage via a transformer, the current passing through its primary winding must fluctuate. So a vibrator had to be introduced into the primary circuit (in essence like the trembler of an electric bell). The vibrator added to the weight of the power pack and the drain on the battery. In 1957 Metz-Apparaterwerke introduced a unit employing a transistor to replace the vibrator unit. The new unit not only eliminated the weight of the vibrator but, since the frequency at which a transistor operates is much higher than that of a vibrator, enabled a smaller, lighter transformer to be used. Over the years the power-to-weight ratio of power packs has been improved by developments in capacitor design and the use of printed circuits.

Current may, of course, be drawn from the public a/c mains. The voltage is readily adjusted by the use of a transformer, but it has to be rectified before it can be used to charge the storage capacitor. Provision is usually made in accumulator-powered units for charging the battery from the mains; often the unit may be operated when connected to the mains.

The flash tube is filled with a gas, usually xenon, at low pressure. Metal electrodes are sealed into the ends. According to their length and the type of reflector into which they are fitted the tubes may be straight, bent into a "U" shape, fashioned into a helix or, for special purposes, bent into an almost complete circle to surround the lens and provide flat lighting.

The capacitor voltage is arranged to be lower than that required to break down the resistance of the tube, so that the discharge may be initiated by an external control. That is achieved by applying a high-voltage pulse to a third electrode, usually external, in the form of a clip or merely a twist of wire around the tube.

### Applying the Triggering Pulse

The triggering pulse is applied by discharging a small capacitor through the primary of a step-up transformer, the secondary winding being connected to the external or trigger electrode. The capacitor-transformer primary circuit is closed by the synchro-contacts in the camera shutter or, of course, by closing the "open flash" switch.

It may take from about 5-20 sec. to charge the main capacitor, so it is necessary to introduce some method of indicating when it is charged. In portable sets that is done by fitting a neon lamp across the capacitor in series with suitable resistors so that the neon strikes when the capacitor voltage reaches a certain level. That usually



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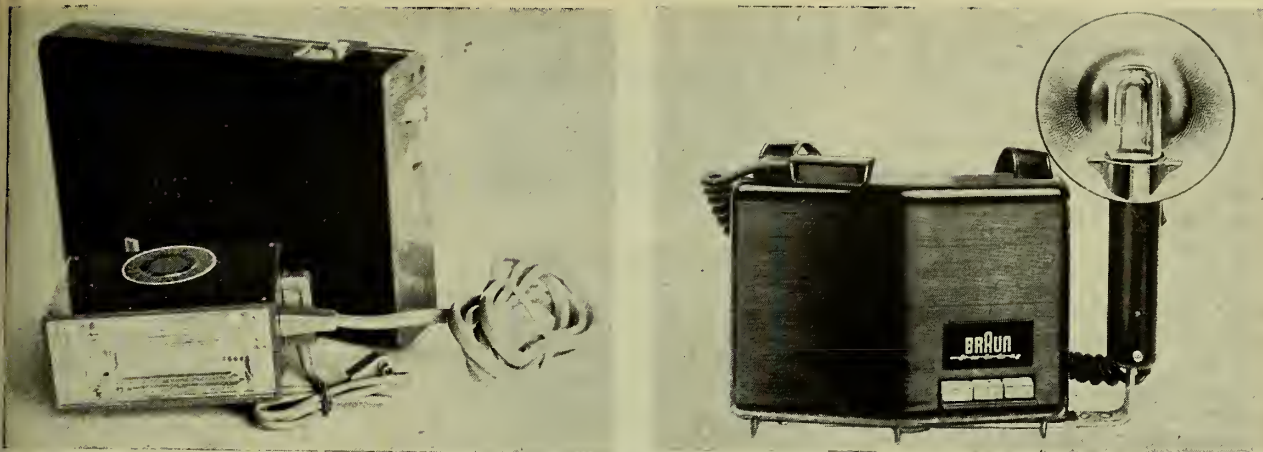
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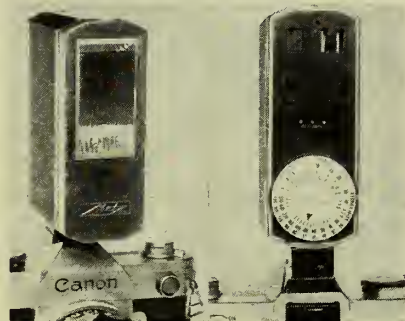


Left: Braun F 40 electronic flashgun. A two-part unit which can be operated from dry cells, a nickel-cadmium accumulator or, when the latter is installed (with its charger) from a/c mains. Right: Braun Hobby Automatic Unit EF3. Advanced portable unit operating from accumulator or a/c mains; built-in charger; push-button change-over from battery to mains operation; provision for half-power discharge; transistor-controlled idling circuit; provision for addition of extension heads (up to three); alternative lead-acid or nickel-cadmium accumulator.

happens when the voltage is 80 per cent. of maximum, so a few seconds should be allowed after the neon strikes before discharging the flash in order to ensure that maximum value is obtained. Another useful feature of the neon lamp is that it gives an idea of the state of the battery. If the recycling time (as the charging time is usually called) becomes much longer than that which is required when fresh batteries are in use, the indication is that dry cells should be relaced or an accumulator recharged.

Many readers will remember that it used to be the practice to rate the power of an electronic flash unit in terms of Joules. The Joule, a unit of electrical energy named after an Englishman, Professor J. P. Joule, represents the power produced by one watt flowing for one second — hence the use of the term watt/second in

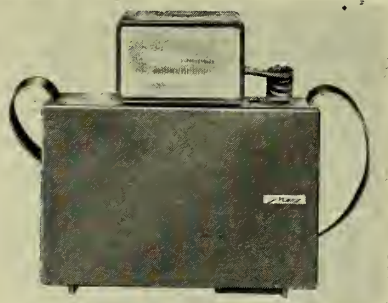
foreign literature. But the term is of little practical value in current electronic flash practice since the actual illumination of the subject may be influenced by the design of reflectors as well as by variations in efficiency between tubes operating at different voltages, gas fillings, etc.



Mecablitz 118, front and rear views. A self-contained unit operating from sealed-in nickel-cadmium battery or a/c mains. Built-in charging unit. Rear view shows exposure calculator. Note the two pilot lights (top right); one is for battery check, the other is the ready light. Provision is made in the foot to make contact without shutter lead which, if used, cuts the centre connection.

It is safer to base exposures on the "guide number" supplied by the manufacturer, though some adjustment of guide number may be required to suit personal techniques and preferences. A guide number is the product of the flash-to-subject distance and the f/number of the lens stop to be used. Thus, for a guide number of 100, and for a subject 10 ft. from the flash, the lens aperture should be set at f/10. Caution should be used when using guide numbers quoted in continental literature, as they may apply to metres rather than feet.

The colour temperature of electronic flash is sufficiently close to daylight for most practical purposes—it ranges from 6,000°K to 7,000°K—and so is suitable for use with daylight colour film, even for synchro-daylight flash. Synchronisation with diaphragm shut-



Mecablitz 502, a fully transistorised unit powered by non-spill lead-acid accumulator; output can be reduced to half power; will accept up to four Mecatwin extension heads. Nickel-cadmium battery available; built-in charging unit.

ters offers little difficulty, but only the slower speeds of focal-plane shutters permit exposures by electronic flash, the highest speed depending on the speed of the blind travel. The topic of synchronisation will be discussed later.

### Chemical Flash

The light emitted by an electronic flash tube is produced by physical means, but chemical reactions have been used for over a century to produce the necessary light for photographic exposures in locations where daylight is not available.

In October 1859 William Crookes suggested burning phosphorus, or the then newly discovered metal magnesium, in a jar of oxygen to illuminate the interior of the Mammoth Cave in Kentucky, so as to enable photographs to be made. Later the same year, in *Philosophical Transactions of the Royal Society*, Roscoe and Bunsen also mooted the use of magnesium as a photographic illuminant.

Practical experiments were made in Manchester in 1864 by Alfred Brothers, who photographed Sir David Brewster and Fox Talbot by the light of burning magnesium ribbon. Exposures were of the order of 40 sec. or so. There followed mechanical devices to feed mag-



Braun F 80 high-performance unit which forms the nucleus of a flexible installation; mains or battery powered; transistorised voltage-changing circuit; normal or wide-angle coverage adjustment; 160J output which can be divided between two heads or used to feed up to three extensions and provide 1 x 160 and 3 x 80J flashes.



nesium ribbon or wire into a flame. Although those methods of producing light by the combustion of magnesium cannot be regarded as flashlight, they did pave the way for rapid exposures by magnesium light. In an early form of magnesium flash-lamp, magnesium powder was blown through a spirit flame by means of a rubber ball and tube, such as is used on atomisers. Later, combustion of the metallic powder was accelerated by mixing with it an oxidising agent. Combustion was initiated by "touch paper," percussion cap, spark from a "flint" wheel, or by passing an electric current to fuse a wire buried in the powder.

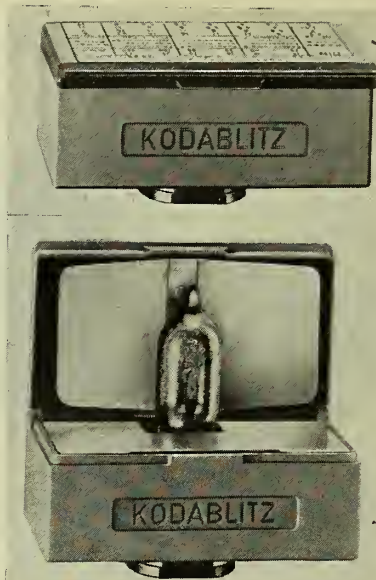
Flash-powder remained the usual form of portable light source for a considerable time—in fact two varieties are still supplied by Johnsons of Hendon, Ltd., indicating that there are still users. As an illuminant, flash-powder was very efficient, the actual light source being quite large. The great disadvantage was the concomitant cloud of magnesium oxide. The hazard of fire was ever present as damp powder became explosive.

### The Flash-bulb

In 1930 the flash-bulb made its appearance. The English-made version, the Sashalite, had a clear glass bulb about the size of a 150-watt general-service lamp. The filling was thin beaten-aluminium foil in an atmosphere of oxygen. Ignition was initiated by a fine filament coated with a primer paste containing zirconium. A dry battery supplied the current to heat the filament, and the primer spluttered and ignited the foil. As the products of combustion were contained within the glass envelope, the process was clean and much safer than the open-fire method using powder. However, ignition was not so consistent as with modern bulbs, and the various devices to link shutter release and bulb firing may be considered rather as sophisticated versions of "open flash" than as synchronisation.

The Philips organisation in Holland produced a bulb with a filling of nitrogen monoxide and carbon disulphide, but the bulb was bulky for its light output.

The modern bulb is remarkably consistent in performance, a fact that has made accurate synchronisation possible. The metallic filling is shredded foil of carefully controlled thickness, and the quantity introduced into a bulb is regulated by a machine that cuts off a specified length of foil, which is then shredded by rotary cutters before being delivered into the bulb on a current of air. For safety, the filled and sealed bulb is dipped in an anti-shatter lacquer which, in bulbs intended for use with daylight-balanced reversal colour film, is coloured blue to adjust the colour temperature of the emitted light.



Kodablitz flashgun.

Flash-bulbs are issued in a variety of sizes and light outputs, the large professional types having Edison screw caps. The smaller types intended for amateur use are capless, the filament support wires being brought out and bent to make contact in the bulb holder. The omission of the metal cap enabled a copper or two to be clipped off the price.

The most recent addition to the range is the AG1 (all-glass), a tiny bulb measuring only  $1\frac{1}{8}$  inch long by  $\frac{7}{16}$  inch diameter. This degree of miniaturisation was made possible by introducing the oxygen under pressure.

An exceptionally wide choice of flashguns is available and, except for professional types, competition seems to be in the production of smaller units. The AG1 type of bulb has enabled guns hardly bigger than an

ordinary match box, and "repeater" guns, in which a number of bulbs are stacked in a magazine rather like a cartridge clip, to be produced. All but the simplest use a capacitor circuit to fire the bulbs, the capacitor being charged by a hearing-aid battery (usually 22½-volt, although there are guns that require a 15-volt battery). Isolating the bulb from the battery in that way obviates misfires due to internal resistance of a failing cell. A partially exhausted battery charges the capacitor more slowly than a fresh one, but builds up a charge to fire the bulb while the low-resistance capacitor/bulb circuit ensures accurate timing of the flash.

At least one batteryless gun remains on the United Kingdom market — the National Hyper-D (Silber) in which the capacitor is charged from a small dynamo, which is spun by rotating a milled knob on the back of the case. A gun with a difference is part of the Hoptix torch system (Photo-Science) for which there is a flash head for attachment to the basic cadmium cell unit, which is charged by simply plugging in to a two-pin, 5 amp. a/c mains point.

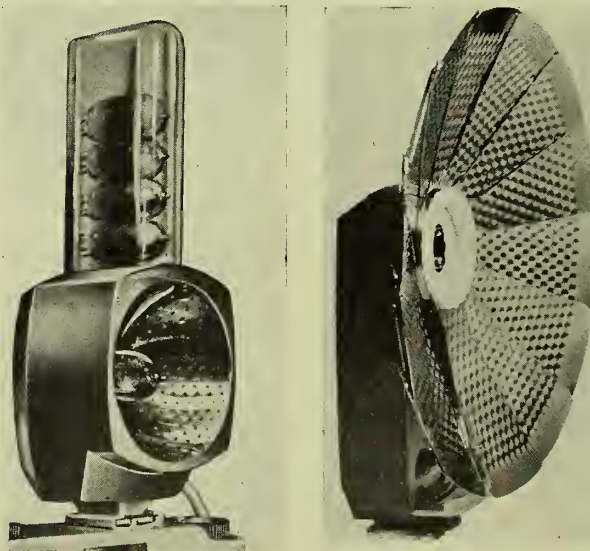
### Synchronisation

Though the term "flash" would appear to exclude the element of time, it must be appreciated that the shutter blades take a few milliseconds to open and close, and that there must be a short interval between the closing of the firing switch and the filament, reaching a sufficiently high temperature to ignite the filling. The object of synchronisation is to apply a "handicap" to one of the processes so that the peak brilliance of the flash occurs when the shutter is open.

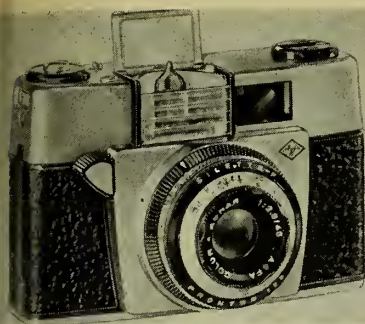
Focal-plane and diaphragm-type shutters present very different problems in synchronisation. Focal-plane shutters must be fully open when the flash

occurs or the film frame may be partially masked by one or both blinds. That dictates the use of a comparatively slow shutter speed—usually of the order of 1/30 sec., though with the Leicaflex the blinds travel so rapidly that synchronisation with electronic flash is possible at 1/100 sec.

Left: Duo-Lux Quick-fire repeating flashgun. Right: Duo-Lux Primus flashgun, typical of many with fan-fold reflector. Both are distributed by J. J. Silber, Ltd.







Agfa Silette with built-in flash unit for AG1 bulbs.

The "Copal Square" focal-plane shutter, whose blades work across the narrow dimension of the frame, synchronise at 1/125 sec. Many focal-plane miniature cameras have a special X synchro setting, usually denoted by a "lightning flash" symbol on the speed dial. Special bulbs with long-duration peak output are available for synchronising with focal-plane shutters. They are designated "FP."

Synchronisation of diaphragm shutters is simpler and two systems—X and M—are used. Set at X, the shutter contacts close when the shutter leaves are fully open so that synchronisation is possible with electronic flash at all speeds, there being negligible delay (perhaps 3 microsec.) between contact and flash.

M-type bulbs, the type normally used by amateurs, take from 18 to 20 millisecc. to reach peak output. In order, therefore, to utilise the light efficiently at the X setting, the shutter speed must be slow enough to allow the light to fall to half-peak value before the leaves close. That requires the speed to be not much faster than 1/25 sec.

With the synchro setting at M, the

firing contacts are closed a few millisecc. before the shutter blades commence to open. The peak value of the flash, and the fully open position of the blades, are thus caused to occur at the same instant. That arrangement allows synchronisation at shutter speeds higher than 1/25 sec. though only a "slice" of the light output of the bulb may be utilised. Hence lower guide numbers are quoted for high shutter speeds and M synchronisation.

Many cameras have provision for the attachment of flash-guns, but the flash-on-camera position, though convenient for operating, is not the best, since it produces a flat lighting effect. If the subject is too close to the background a harsh shadow outline is likely to result. It may be avoided to a large extent by holding the flash-gun high above the camera, so as to reduce the height of the shadow and render it



Kodak Instamatic 100 camera showing built-in pop-up flash.

less obtrusive. A popular method of lighting is known as "bounced flash." It entails directing the light towards the ceiling or walls, if they are light-toned, so that the subject is illuminated by soft reflected light. In calculating the working aperture when using the bounced-flash method, it must be remembered that the flash-to-subject distance is the sum of the flash-to-ceiling and the ceiling-to-subject distances, and that the diaphragm should be opened an extra stop or two according to the reflectivity of the surroundings. It should also be remembered that the illumination falls off in accordance with the inverse-square law, and the subject depth should therefore be restricted unless supplementary flashes are used to illuminate the more distant planes.

### Synchro-daylight Flash

It is perhaps pardonable to regard the suggestion that flash should be used in daylight, even in brilliant sunshine, as a paradox. But a few moments' reflection brings the realisation that the brighter the light the darker the shadow it casts. The matter is a simple one of contrast. The actual luminosity of the shadow may not be any lower than one cast by a less bright light, but its contrast with the highlight will

be much greater. The eye can accommodate itself to that situation to some extent, but the photographic emulsion has no such compensating mechanism. Nor can it cope successfully with a brightness range such as is exhibited in a subject illuminated from behind, or to the side, by a brilliant light source. Colour materials will not cope with a so wide a range of brightnesses as will monochrome film, nor, for practical purposes, is that necessary. In monochrome photography the form of the subject is conveyed in terms of light and shade. Colour pictures depend less on tonal range than on actual hues. Masses of dark shadow are seldom acceptable in colour photography.

### Relieving Deep Shadows

Flash, therefore, has its uses in daylight, particularly in bright sunshine, to relieve deep shadows. In other words it is used as a "fill-in" light, and should therefore be controlled, so as not to compete with the main illuminant. Either expendable bulbs or electronic flash may be used but the practical problems are rather different according to which is chosen. Of course, if colour is being used, the flash-bulb must be one of the blue variety. The colour temperature of electronic flash is sufficiently close to that of daylight to require no filtration.

Interesting effects are obtained by back-lighting, producing a "rim light" outlining the subject—but at the expense of plunging the camera-side aspect in deep shadow. Imagine a blonde model with her back to the sun. Her hair may have a radiant glow and her neck and shoulders may be outlined in light, but her face may be just a dark mass. A judicious amount of frontal light reveals her features without destroying the attractiveness of the back lighting. This is how it is done. With a small bulb in the flashgun mounted on the camera, the guide number table is consulted and the diaphragm set one or two stops lower than that recommended, according to the depth of the shadow. Next a meter reading of the scene is taken from the camera position, the shutter speed appropriate to the aperture decided upon and the exposure made. That causes the background to be exposed normally but softens the frontal shadow areas. Electronic flash calls for a different approach, since the shutter speed has no effect on the flash exposure. For that reason the strength of the flash should be limited. The "normal" exposure should be determined as usual and the shutter speed/stop combination decided on. Next, the distance of the flash (which should preferably be a low-power unit) to effect a normal exposure if the iris were set one or two stops higher, should be found. Again the choice depends on the depth of the shadow to



Voigtlander Vitrona 35-mm. camera with built-in flash-head. The faceted flash window is seen to the left of the viewfinder. Power pack is in the pistol-grip handle which can be readily detached.



be relieved. Having placed the flash at that distance from the subject—preferably with someone to hold it at about eye level—the photographer may find that the distance is inconvenient. It then becomes necessary to reduce the illumination due to the flash by draping over it a clean white handkerchief, which will reduce the power to about one-half. A certain amount of experience is required to be able to decide on how far to “dilute” the flash but that is soon acquired with practice.

A useful application of the technique is in outdoor portraiture under bright sunshine when, facing the sun, the model is liable almost to close the eyes to cope with the glare. By photographing from the shadow side a relaxed portrait can be obtained. Photography of subjects in the shadow of buildings, under awnings and similar shaded locations will be facilitated by a slight “boost” with flash.

Since illumination from a flash-bulb or electronic tube falls off according to the inverse square law, the technique can be used to photograph subjects against a dark background without illuminating it to any serious extent. If, say, the subject is as far in front of the background as it is from the



Picture on left taken by daylight alone, that on right had addition of one PF1 flash-bulb 10 ft. from subject.

flash, the background will only receive, of the strength of the light from the flash, a quarter of what falls on the subject. That will allow considerable adjustment of the tone of the background.

Indoors, too, flash can be used to “fill-in” dark corners without “burning out” areas that are sufficiently well illuminated by the available light.

For the photographic retailer flash

equipment, electronic or expendable, means much more than the immediate sales. It becomes a spur to the photographer to extend his activities to indoor exercises, and helps to keep cameras clicking through the winter and after dark, with consequent extra revenue from sales of films and D. & P. Even in high summer flash has its uses, as has been described.

## Recent Developments in Colour Photography

### ADDRESS TO ROYAL SOCIETY OF ARTS

“ALTHOUGH,” quoted DR. R. W. G. HUNT (Kodak, Ltd.) from a lecture to the Society by Dr. Spencer in 1939, “the second Great War has resulted in an eclipse of interest in colour photography in England, I am convinced that the set-back is temporary. A considerable increase in the use of colour is the next logical step both in photography and in illustration. There are no longer technical difficulties which make this increase impractical, and once the problem of guns and butter recedes into the background, colour photography will be one of the sane human activities ready to come to the fore.” Dr. Hunt was giving the Peter Le Neve Foster lecture to the Royal Society of Arts in London on February 10. He hoped to show, he said, how right Dr. Spencer had been.

#### Subtractive Systems Superior

By 1939, the processes on the market all attempted the reproduction of colours by *trichromatic* means, no attempt being made to reproduce the correct amount of light at every wave-length of the spectrum, the aim being limited to producing roughly correct amounts of light in the reddish, greenish, and bluish parts. That was still true today, but whereas in 1939 both the additive mosaic and the subtractive processes were available, today only the latter survived. The subtractive systems had proved superior for three main reasons. First, the presence of the mosaic restricted the degree to which the film could be enlarged (important in cinematography, where high magnifications

are used in the projected image); secondly, the presence of the mosaic resulted in a loss of light, which was undesirable in projected pictures, and thirdly, the mosaic made it impossible to reproduce whites or light colours on a reflection print.

#### Process Described

In 1939 the two main subtractive systems available, Kodachrome and Agfacolor, both formed their colour dye images by a reaction known as colour development, in which a photographic developer of the paraphenylenediamine type was used. By developing the exposed silver halide of the photographic emulsion to silver the developing agent became oxidised, and in its oxidised form it reacted with a “coupler” to form an insoluble dye. The more silver halide that was developed, the more dye was formed and vice-versa, so that the concentration of the dye depended on the exposure of the emulsion; in that way the dye was distributed as an “image” of the scene in the required manner.

Three different couplers had to be used, capable of forming cyan, magenta, and yellow dyes respectively. In the Kodachrome system the three couplers were used in three separate colour-developing solutions, but in the Agfacolor system the couplers were situated in the red-sensitive, green-sensitive, and blue-sensitive layers of the film, and were prevented from wandering from their proper layers by being attached to long-chain molecules, which rendered them comparatively immobile. The

method of processing Kodachrome had changed around 1939 from a system of forming dye-images of each colour in several layers and then bleaching them away where they were not wanted, to a system in which, by re-exposing the film to coloured lights, each dye was produced in only the required layer; but the couplers were still in three separate solutions as before.

#### Later Developments

Another method immobilising couplers in photographic layers had been introduced in 1942: the couplers were first dissolved in an oily solvent, and the solution of coupler was then dispersed in the form of fine droplets in the layers. Thus by 1942 the fore-runners of most of today's colour products had emerged and a steady programme of improvement had since been followed. From 1950 onwards the colour transparency, as a medium of still colour photography, had grown enormously in popularity and it was estimated that, for every one colour transparency produced in 1952, no fewer than eighty were produced in 1962. That rate of increase in colour transparencies was far greater than could be accounted for solely by the increase in standard of living. A contributory factor had undoubtedly been the cost to the photographer of exposing the colour transparency. Since 1950 the average wage or salary had more than doubled, while the prices of colour films had remained almost static so that, in terms of man-hours of work, the colour transparency



was effectively less than half as expensive as formerly. The cost of a 35-mm. camera for exposing the popular colour-transparency films had fallen from over £20 to less than £8 between 1950 and 1962; and that, coupled with the difference in earnings, represented an effective drop to one-sixth of the original figure. With the advent of colour films needing less exposure in the camera, simpler cameras could be introduced, so that, with the advent of the Instamatic series in 1963, as little as £3 sufficed to buy a 35-mm. camera, an effective drop to about one-fifteenth of the 1950 figure. A similar, though not quite so large, drop in the price of projectors had also taken place.

The colour transparency had not only made an enormous impact on amateur photography, but was also widely used in larger sizes, commonly up to 10 x 8 in. for a wide range of commercial work. In view of the universal preference in black-and-white photography for reflection prints (except for motion pictures, where it was virtually essential to project an image), why had the colour transparency become established in that period of time? In 1939, Dr. Spencer had said "No colour print process as yet available is simple enough or certain enough to make an appeal to the typical amateur comparable with that of the colour transparency." That was no longer true in 1965. What had been the problems, and how had they been overcome?

The simplest way of producing a reflection print might seem to be merely to coat a colour photographic material on a paper support instead of on the usual transparent film-base and to use it in the camera, but such a system gave laterally reversed, or mirror-image, pictures of the real world. A prism in front of the camera lens would overcome some of the difficulty, but was inconvenient in practice. The Polacolor process overcame the problem in a quite different manner. The image, immediately after development, was soluble and that enabled it to transfer to a receiving sheet placed in contact with it, where it became insoluble again. Since the receiving sheet was placed face to face with the material exposed in the camera, the transferred image was laterally reversed in respect to the camera image, and was, therefore, correct in respect to the original scene. The system was interesting technically because it was one of the few available systems that did not depend on paraphenylenediamine colour developers, and practically because the development and transference of the image took place actually in the camera.

#### Print System Disadvantages

But whether by prism or by transfer, direct reflection print systems suffered from two disadvantages. First, no enlargement occurred, necessitating a compromise between large cameras and small prints; secondly, accurate determination of exposure was necessary because the tolerances were smaller for reflection prints (which could be compared with other objects in the field of view surrounding them) than for transparencies projected in a dark room. It might be thought that the most attrac-

tive alternative to producing reflection prints directly in the camera would be to provide means whereby reflection prints could be made from transparencies. It was not surprising, therefore, that the first colour reflection prints offered to the public had used colour transparencies as intermediates, both in the United States (in 1941) and in this country (in 1954).

But today reflection prints made from colour transparencies, although improved in quality since they were first introduced, constituted only a small fraction of the total colour reflection print market in this country, the great majority now being made from colour negatives. Why?

#### Negative as Intermediate for Prints

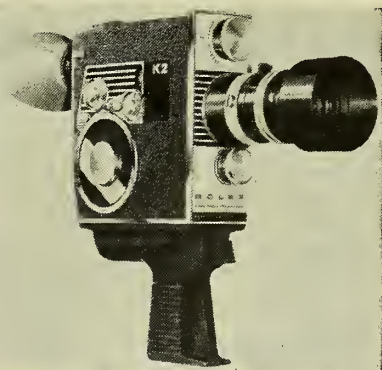
Colour negatives not only reversed the tones of the original scene, but they also reversed the colours, so that reds became cyans, greens became magentas, and blues became yellows, and vice versa; by printing on a similar material both tones and colours were reversed again to depict the scene correctly. The colour negative was obviously not itself intended to depict the scene; it could therefore be designed to be the best possible intermediate for making reflection prints. Thus the negative film was made to have long exposure latitude, so that good prints could still be made, even if the exposure was different from the correct value by factors of 2, 4 or even 8 times. The film was made of low contrast so that over-exposed negatives were not very dense for printing. The film could also be made of an overall orange colour, which enabled certain deficiencies of the cyan, magenta, and yellow dyes to be corrected. That was important because those dyes were used twice, once in the negative and a second time in the reflection print itself; a transparency would look most unnatural if it had an overall orange cast. A final, and not unimportant, factor was that a print made from a negative was judged on its own merits as a reflection print, but if it had been made from a transparency there was an inevitable tendency to compare the print and the transparency and to feel some dissatisfaction about any differences between them. While there was no doubt that the colour negative film available today was capable of yielding excellent reflection prints, more was required for a successful system of amateur colour photography: it must be capable of a high yield of acceptable, if not excellent, prints when used by photographers with little experience operating in a wide range of conditions; and the prints must be reasonably priced. An important contribution to the problem had been made in 1946 when, as the result of ideas advanced by R. M. Evans of the Eastman Kodak Co., apparatus was introduced that printed every negative in such a way that the colour of the light reflected by the resulting print, if integrated, was approximately grey. At first sight that seemed a strange thing to do; because if, for instance, a picture of a grey car were taken first against a background of a blue sky, and then against a background of a yellow cornfield, the printer would have to make the print of the first scene much

yellowier than the original, and that of the second scene much bluer than the original, in order that both prints should "integrate to grey"; the grey car would thus be reproduced a yellowish grey in the first print and a bluish grey in the second. Such colour distortions did in fact occur but it had been found in practice that the vast majority of amateurs' colour negatives contained a mixture of colours the light from which, when integrated, differed little from that of a negative exposed under the same conditions to a uniformly grey scene. The principle of integrating to grey did not, therefore, except in quite rare instances, produce noticeable colour distortions. What it did do was to correct for unwanted changes in overall colour, such as might be caused by changes in the colour of the lighting used for the scene. As the printer also corrected for the overall density of the negative, the result was to produce from negatives exposed in widely differing conditions sets of prints of remarkably uniform quality. Manual controls could be used to over-ride the automatic correction features in those examples where they would give erroneous results.

With such equipment it was possible for one operator to produce many hundreds of colour prints per hour, the majority of which were of acceptable quality; those of poor quality were reprinted on a subsequent occasion using, if necessary, manual over-riding of the automatic exposure determination. That high rate of successful printing of colour negatives had, amongst other factors, contributed to a situation in which the prices of such prints had actually fallen somewhat since their introduction in 1957. Reduced cost, high quality and availability in sizes for popular roll-film cameras accounted for the rapid growth of the system.

#### FINISHERS' AFFILIATES

THE Wholesale Photo Finishers' Association is admitting as affiliate members principals, assistant principals, lecturers and teachers in photography at colleges, schools of technology, and schools of further education, principals of photographic departments in industrial, Press, medical or police establishments, and officials of similar bodies. Annual subscription for new category is £4 4s. Details from secretary, 38 Museum Street, London, W.C.1.



A cine camera featuring "through-the-lens" exposure control (see p. 308) is the Bolex K2, marketed by Cinex, Ltd.



# Adding Sound to 8 mm. Cine Films

THE simplest way of adding sound to any presentation of cine films is the provision of an accompaniment of appropriate music—preferably without any vocal chorus—from an ordinary radiogram. In addition to the more usual light orchestral recordings special "mood music" recordings are available. An unobtrusive background of that kind helps to inhibit audience chit-chat and also masks the noise made by the projector.

## A Stage Further

A tape-recorder can be used in the same way, but the more adventurous may like to go a stage further and compile a special recording for individual films, even adding some sound effects if the tape-recorder has provision for superimposing over an existing recording. Instead of being limited to one or two gramophone discs played in sequence, selections may be made to fit into the various sequences in the film. Again, with the aid of the superimposition facility, a simple spoken commentary can also be added. Most good tape-recorders run at a consistent speed, so that if projector and tape-recorder are started together—or as nearly so as possible—the commentary can fairly safely be assumed to come in the correct place in the different sequences in the film. For that to be done successfully the sequences should not be too short (that is, avoid too much quick cutting from one scene to another or from distant views to close-ups and back again): the picture or scene should be allowed a few seconds on the screen to establish itself, then the commentary—preferably brief and concise—is given, after which the scene should change.

So far all that has been considered is the addition of sound which keeps more or less in step with the pictures, depending entirely on the constancy of speed of the tape-recorder and the projector. Provided that nothing elaborate is attempted this simple method can be perfectly satisfactory; even clumsily done it is often better than showing even one's holiday records "cold."

The next possible step is a more precisely synchronised matching of picture and sound, again using a good conventional tape-recorder. To effect the matching of the two an "adaptor" is placed between the tape-recorder and the projector so that the two machines are kept more accurately in step. Instead of the magnetic tape passing from the feed spool, through the "heads" of the reproducing section and on to the take-up spool, a loop is made so that the tape passes through the adaptor before it reaches the take-up spool. With an arrangement of that

kind one can be much more ambitious and even begin to think of quite abrupt changes in music matching changes of scene. Sound effects can be added that will match quite accurately the picture on the screen. With a great deal of care and no little patience the more skilled user of cine-camera and tape-recorder can even obtain a fair measure of "lip-synchronisation," that is, if someone is seen speaking in either mid-shot (about three-quarter length figures) or in close-up (head-and-shoulders, say) then the lip movements will match the words spoken.

For "lip-synchronisation" a recording may be made at the time that the film is shot, possibly on a portable battery tape-recorder provided that long conversations are not attempted, and then this recording may be transferred (or "dubbed" as it is called) to the final tape which is to accompany the completed film. A somewhat simpler method, even if it savours of cheating, is to make a note of what is said at the time of filming and then get the person concerned to speak the words again into the recorder microphone, when the film is projected, in time with the lip movements on the screen.

Another way of ensuring that the tape-recording runs precisely in step with the film in the projector is by using a machine which has provision for both a spool of film and a spool of magnetic tape which run through the machine together. This type of equipment, however, is rather more elaborate and expensive than is justified for home use. It is referred to as "double-heading."

## Stripe

The way in which it is thought that sound for 8-mm. will really develop and become most popular, though, is the method of recording on a special magnetic "stripe" along the edge of the film. In that way the recording is permanently married to the picture and, apart from the risk of accidental erasure by incorrect manipulation of the equipment, it should last almost as long as the picture itself. The method is, of course, precisely the same as that by which professional films are made.

There are now a number of projectors for 8-mm. film on the market which also incorporate facilities for screening sound-on-film pictures: many of them also allow for recordings to be made on the film after it has been processed and edited. In general two methods of adding the magnetic track are available—apart from film which is manufactured with a magnetic stripe already on it. The first method is to put a narrow coating of the magnetic

material on to the edge of the film itself and the other is to cement a narrow strip of magnetic tape along the edge. In either case the "stripe" is a permanent part of the completed film.

Then, from gramophone records, other tape recordings and the addition of spoken commentary, a sound-track can be added which considerably enhances the presentation of the completed film. With due care and attention even lip synchronisation can be tried to give a really professional touch.

Not everyone, though, has an 8-mm. sound-on-magnetic-film projector: the most recent advance is a sub-assembly on which most silent 8-mm. projectors can be placed. The sub-unit contains a magnetic-recording and reproducing equipment with all the facilities of a conventional tape-recorder, except that it is specially designed for use with 8-mm. film. From this it will be realised that there is virtually no limit to the permutations and combinations of sound and film that are readily available to the amateur cine enthusiastic. Moreover, sound-on-film need not be expensive.

## Sophisticated Customers

The time when the average customer was prepared to accept the processed film and simply project it as received from the laboratory is passing—rather more quickly than many people realise. Even a slight knowledge of what is currently available may be of immense help in interesting the cine-snapshooter in something a little more sophisticated than a camera and a projector. Not everyone is content simply to sit back and watch an unedited record of a holiday—even television, much derided as an entirely passive form of entertainment, is arousing interest in presentation of everyday scenes. This yardstick will become of increasing importance when the average viewer realises that little of what he or she sees on the television screen is "live"—most of it has been either put on film beforehand or filmed and then edited and put on to video-tape (which is simply a magnetic means of recording pictures instead of sound) for later presentation on the television screen.

The progressive dealer should himself take an active interest in what is currently available—he need not necessarily stock every variety of apparatus on the market for that would entail a fantastic outlay of capital. What he should be able to do, however, is to discuss authoritatively the various ways and means by which his customers can get more enjoyment out of their cameras and projectors, for that is a "sound" basis on which to ensure increased sales and goodwill.



## PHOTOGRAPHIC NOTES

**To Own Design.**—Lens tissues that can be supplied in packets printed with a pharmacist's own design and wording are marketed by Cleanright Tissues, 48 Newton Road, Torquay, Devon.

**Flash-bulb Offer.**—Kenmore Merchants, Ltd., 8 Burnett Street, Bradford, Yorks, are currently advertising a special offer to pharmacists of 16-mm. flash-bulbs, both clear and blue.

**Iodine Quartz Automatic Projector.**—Latest model in the Classic range of slide projectors marketed by Gnome Photographic Products, Ltd., Caerphilly Road, Cardiff, is the 757 Auto Classic, which provides automatic re-



mote control of both slide-changing and focusing. Fitted with a 24-volt 150-watt iodine quartz lamp for "consistent, high light output of the correct colour temperature" the projector is supplied with an f/2.8 Wilon lens of 85-mm. or 100-mm. focal length. A conversion kit consisting of a 60-mm. f/2.8 lens and matching front condenser is available that allows the projector to be used for 26.5-mm. x 26.5-mm. and half-frame slides.

**Direct Only.**—Kettering Cartons, Ltd., Montagu Street, Kettering, Northants, are reverting to selling their Dri-Fix transparency holders direct to the trade (instead of through distributors).

**Guaranteed for Life.**—S. & H. C. Taylor, Ltd., 13 Alcester Road South, Kings Heath, Birmingham, 14, offer a "lifetime guarantee" with their Swift binoculars.

**Surplus Stock Purchased.**—Godley Spears, Ltd., 2 Shudehill, Manchester, 4, purchase surplus and out-dated stocks of photographic films and papers in any quantity, also photographic equipment of every description.

**Improved Design.**—The C.D.C. custom-built photo-cases marketed by Commercial Drug and Chemical Co., Ltd., 460 Holloway Road, London, N.7, now have steel sides. Prices are unchanged.

**Photographic Chemicals.**—William Blythe & Co., Ltd., Holland Bank Chemical Works, Church, Accrington, Lancs, invite inquiries regarding their Eagle brand chemicals including sodium metabisulphite, sodium thiosulphate, epsom salts, glauber salts and photographic chemicals.

**Automatic Projector.**—In addition to their Halina slide viewers, J. J. Silber, Ltd., 11 Northburgh Street, London, E.C.1, draw attention to their Halina-mat 300-watt automatic projector for 2 x 2 in. slides, to the Canon range of 35-mm. cameras, to Enna lenses and to their extensive range of accessories.

**Optical Goods from Japan.**—A comprehensive range of binoculars, microscopes, telescopic sights and spotting sights imported from Japan are supplied by Greenhill & Ellis (Optical), Ltd., Ling House, Dominion Street, London, E.C.2. The company also supply prepared microscope slides.

**For Batteries or Mains.**—Mains transformers are available for use with both the Solar and Stellar slide viewers of Photax (London), Ltd., 70 Charlotte Street, London, W.1. The viewers may also be powered by three U11 batteries. Messrs. Photax are also the United Kingdom agent for Yashica cameras, tripods and other accessories and for Yashinon lenses.

**Recommended by Experts.**—Atlas Lighting, Ltd., Thorn House, Upper St. Martin's Lane, London, W.C.2, are currently advertising their Atlas photo-flash bulbs by means of whole-page articles written by well-known photographers and appearing in leading amateur photography journals, recommending the use of the bulbs.

**Transparency Storage.**—Robinson & Sons, Ltd., Wheat Bridge Mills, Chesterfield, are manufacturers of transparency storage cabinets and transfer boxes for use with projector magazines. They also manufacture 35-mm. slide boxes, one of which received an "excellence in packaging" award in the 1964 International Rigid Box Contest.

**Distribution to Pharmacists.**—H. B. Dorling, Ltd., Selinas Lane, Dagenham, Essex, hold a comprehensive stock of cameras, films, projectors, and other photographic apparatus and chemicals and hold a large number of agencies. Orders are accepted only from registered pharmacies and are delivered by return, either by the company's van or post free.

**Lecture Service.**—Ilford, Ltd., invite applications from photographic clubs for their free lecture "Sail and Camera," which introduces beginners to the photography of boats. The talk is illustrated by an exhibition of 16 in. x 20 in. black-and-white enlargements. Secretaries should write to Mr. A. Pyner, lecture service, Ilford, Ltd., Ilford, Essex.

**Lamp Included.**—Prices of all projec-

tors marketed by Gnome Photographic Products, Ltd., 354 Caerphilly Road, Cardiff, are now being shown inclusive of the lamp price, and the company's projector advertisements, catalogues and brochures will, in future, carry the new prices. For example, a Gnome 741 Classic 150-watt projector, previously £10 19s. 6d. plus lamp, is now priced at £12 19s. 6d., including lamp.

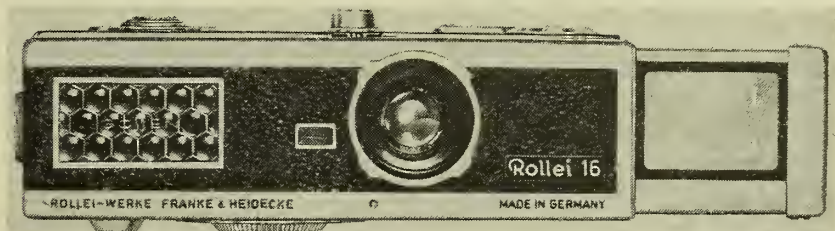
**Increased Capacity.**—Philips Electrical, Ltd., Century House, Shaftesbury Avenue, London, W.C.2, have doubled their production capacity for Photoflux flash-bulbs. The company also manufactures bulbs for continuous lighting and various manufacturers of sunglasses and lightbars use or recommend the PF800R 1,000-watt tungsten halogen tubular lamp and the 375-watt KM Photolita lamp.

**Laboratory Space Doubled.**—A. C. Vallance, Ltd., Milton Street, Mansfield, Notts, are just completing an extension to their colour processing laboratory that more than doubles the available floor space. The company thus become equipped to handle automatically all makes of colour negative film. Having added to the number of colour printing machines they will shortly be running six tracks of continuous paper processing.

**Czechoslovakian Cine Camera.**—Recently introduced in the United Kingdom by David Williams, 5 Glasshouse Yard, London, E.C.1, the Admira 8g cine camera produced by Meopta, Národní Podnik, Prerov, Czechoslovakia, is fitted with an f/2.8 12.5 mm. Mirar lens with coupled semi-automatic exposure meter. Filming speed is 16 f.p.s. with provision for single shots. A moulded pistol grip is supplied with the camera.

**New Zoom Reflex Cine Camera.**—The Bolex P.4 cine camera recently introduced by Cinex, Ltd., Bolex Hotse, Burleigh Gardens, London, N.14, has spring drive with three filming speeds (12, 18 and 40 f.p.s.) and provision for exposing single frames, also backwind and variable shutter. The Pan Cinor f/1.9 zoom lens is manually operated and has a range of 9-36 mm. Fully automatic CdS exposure control with manual over-ride, reflex through-lens viewfinding and integral pistol grip are other features. Price is £109 19s. 6d.

**A New Subminiature.**—R. F. Hunter, Ltd., 51 Gray's Inn Road, London, W.C.1, have received supplies of a new Rollei 16 camera, a pocket 16-mm. subminiature model, that breaks with the tradition of the Rollei twin lens reflexes. The body measures 1½ x 1½ x



**BREAK WITH TRADITION:** The Rollei 16 subminiature camera marketed in Britain by R. F. Hunter, Ltd., 51 Gray's Inn Road, W.C.1, marks the maker's entry into the subminiature market.



$4\frac{1}{4}$  in. and weighs 9 oz. The high Rollei standards of engineering are maintained. Lens is the Zeiss Tessar f/2.8 of 25-mm. focal length in fully automatic shutter programmed from 1/30-1/500 sec. with apertures from f/2.8 to f/22. The viewfinder is fully parallax corrected.

**Approved Protective Grilles.**—Vizor grilles supplied by E. Pollard & Co., Ltd., 159 St. John Street, London, E.C.1, provide protection for camera displays and are claimed "approved by insurance companies."

**Repair Service.**—Facilities in servicing exposure meters and binoculars are among those now provided by Leicester Camera Repair Service, 166 Westcotes Drive, Leicester. Details are available from the company.

**Scottish Photo Wholesaler.**—A three-day service on all orders is offered by James E. Henderson, Ltd., 80 Upper Denburn, Aberdeen, who claim to be "Scotland's largest photographic wholesalers."

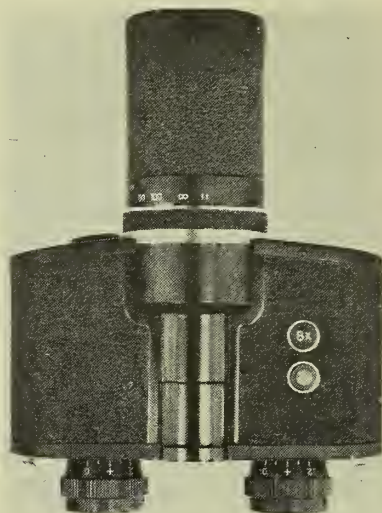
**Express Repairs.**—Vanguard Instruments, Ltd., 233 High Street, Brentford, Middlesex, offer a 48-hour repair service when required. They accept cameras, projectors, binoculars and exposure meters and all repairs carry a 12-month guarantee.

**Film-storage Equipment.**—Up to 3,240 35-mm. negatives or 1,440  $2\frac{1}{4}$  x  $2\frac{1}{4}$ -in. negatives are accommodated in the Minidex unit binder supplied by James Blackwood & Co., Ltd., 22 Baker's Row, London, E.C.1. The binder takes thirty storage units each holding 108 35-mm. negatives or forty-one  $2\frac{1}{4}$  x  $2\frac{1}{4}$ -in. negatives. Messrs. Blackwood also supply a flexible zip binder holding up to 1,404 35-mm. or 624  $2\frac{1}{4}$  x  $2\frac{1}{4}$ -in. negatives using the same units, the Minidex twin 35-mm. binder, Junior 35-mm. binder and Leica negative "libraries."

**Easy-loading and with Automatic Exposure.**—Latest addition to the range of Rapid cameras marketed by Agfa, Ltd., 27 Regent Street, London, S.W.1, the Isomat-Rapid is also the first in the range to have automatic exposure control. The programme plate on the Rapid

from infinity to  $3\frac{1}{4}$  ft. The Isomat-Rapid provides sixteen 24-mm. sq. pictures per cassette. There is a double-exposure prevention lock and shutter release mechanism is locked should the cassette have been incorrectly loaded.

**Power "Zoom" Binoculars.**—High-gate Optical Manufacturing Co., Ltd., are marketing a battery-powered "zoom" binocular with a magnifica-



tion range of  $2\frac{1}{2}$ x to 8x. Addition of a supplementary lens gives a range of 4x to 12x. Object-glass diameter is 35 mm., and focusing is by rotation of the object-lens barrel. Adjustments for eye distance and visual acuity are provided. Speed of zooming is also adjustable, and a battery test lamp gives a check on the condition of the batteries. Price is £67 10s.

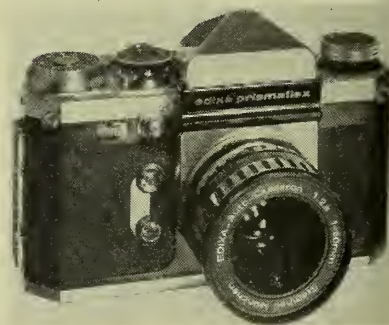
**New Warm-tone Papers.**—Two new "pearl" papers have recently been added to the range of Kodak Royal Bromesko series. White fine pearl, double weight, has "a delicately grained surface with a pleasing low sheen similar to that of Bromesko white fine low-lustre paper, but a warmer tone and slightly lower printing speed." Ivory fine pearl, double-weight, has a similar surface texture and "an ivory tint that enhances its warm tone." Both papers are claimed to be excellent for retouching.

**Two New Japanese Cameras.**—A new camera in the Mamiya range marketed by Rank Photographic, Woodger Road, London, W.12, is the Mamiya Auto-Lux 35 single-lens reflex which features a pentaprism with micro-fresnel screen and centre-spot focusing, and an instant-return mirror. Lens is the f/2.8 Mamiya-Sekor of 48-mm. focal length. A built-in exposure meter for fully automatic or manual operation is fitted and the shutter is a six-speed Copal-X speeded 1/15—1/500 sec. and B, synchronised for bulbs and electronic flash. A second camera added to the range is the Super-de-Luxe 35-mm. coupled-rangefinder model fitted with the 48-mm. f/2 Mamiya-Kominar lens. Automatic parallax compensation is built into the viewfinder. The integral CdS meter has needles visible both in the viewfinder and through an aperture

on the camera body. The Copal shutter, synchronised for bulbs and electronic flash, has ten speeds from 1-1/500 sec. plus B and a delayed action setting is provided.

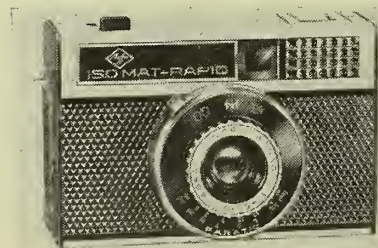
**Processing Services.**—The following companies offer facilities in processing and finishing films: In the London area HAAGMAN COLOUR LABORATORIES, LTD., 71 Endell Street, London, W.C.2, specialise in colour finishing, details and price lists are available on request; JOHNSON PROCESSING LABORATORIES, LTD., 970 North Circular Road, London, N.W.2, deal with both black-and-white and colour and offer a daily van collection in the Greater London area north of the Thames; NOVACOLOR, LTD., Sheffield Place, London, N.16, have recently expanded and reorganised their facilities for dealing with colour materials, and PHOTO LABORATORIES, (LONDON), LTD., 2 Wrentham Avenue, London, N.W.10, deal with Kodacolor, Agfacolor, Gevacolor, Ilfcolor, Ektachrome, Ferraniacolor and black-and-white films. In the East Midlands and East Anglia areas FENCOLOR LABORATORY, P.O. Box 99, Abbey Road, Cambridge, accept all makes of colour films and offer over-riding discounts to members of the Wholesale Photo Finishers' Association. The West and North-west Midlands are catered for by KINGSLEY STUDIOS, Kingsley, Warrington, Lancs; ORMSKIRK PHOTO-SERVICES, LTD., P.O. Box No. 6, Derby Street, Ormskirk, Lancs, make daily collections in many parts of Lancashire throughout the year, and the Colormagna processing service of WILL R. ROSE, LTD., Hamilton Place, Chester, deals with every type of colour film. In Scotland HAMILTON TAIT, LTD., Penicuik, Midlothian, offer to make prints and 35-mm. duplicates from all types of transparencies and 35-mm. transparencies from all colour negatives.

**Family Likeness.**—Newly added to the range of single-lens reflex cameras distributed by Photopia, Ltd., Hempstalls Lane, Newcastle, Staffs, is the Edixa Prismaflex. Like the Prisma it



embodies a fixed pentaprism viewfinder, protected against shock, dust and damp, with a split-image rangefinder. Shutter speeds of 1/30 to 1/500 sec. and "B" are provided with full flash synchronisation. Mirror is of the "instant-return" type, and the lens is an f/2.8/50-mm. Auto Cassaron. Price is £54 18s. 3d.

THE four-colour illustration on p. 311 is reproduced by courtesy of Kodak, Ltd.



cassette automatically sets the sensitivity control of the meter for the film speed in use. The lens aperture is variable between limits of f/4.5 and f/16. A red/green signal in the viewfinder indicates lighting conditions. On the automatic setting the shutter speed is fixed at 1/75 sec., but can be changed to 1/30 sec. for flash exposures, the aperture being selected manually. Lens is a 38-mm. Color-Agnar, focusing



# Identification of Drugs and Poisons

## PROBLEMS DISCUSSED AT LONDON SYMPOSIUM

VISITORS from Belgium, Denmark, France, Holland, Sweden, Switzerland and the U.S.A. were present on March 20 at a symposium on "Identification of Drugs and Poisons" arranged by the Pharmaceutical Society. The symposium was held at the School of Pharmacy, University of London and nearly 300 persons attended. MR. C. W. MAPLETHORPE (president of the Society) welcomed the visitors.

### Punched-card System

First paper, "Solid Dosage Forms—An Aid to Their Rapid Identification," was presented by MR. C. MCARDLE and MISS EILEEN SKEW (pharmaceutical department, General Hospital, Birmingham). The authors described a punched-card system used to record the physical characteristics of each tablet, including diameter; colour (classification is limited to eight: red, brown, blue, green, yellow, purple, white or multi-coloured); whether coated or uncoated; marking or scoring; whether bevelling is present or not; shape other than circular; poisons schedule, if any. The appropriate notches are made in the card, and a note is added referring to samples of the tablet kept separately in plastic bottles in a "reference library."

When an unknown tablet is received its physical characteristics are noted. The cards are placed on a vibrator in a container with sorting bars fitted in positions based on the physical characteristics of the unknown tablet. The vibrator is switched on for 5-10 sec. Cards having the characteristics of the unknown tablet drop downwards. A "needle" may be used to lift out the cards that have not descended.

Should more than one card "drop," comparison with samples in the reference library is normally sufficient to enable positive identification to be made. A five-year survey of cases of acute poisoning carried out at the General Hospital, Birmingham, showed that, of 3,194 cases, 1,920 involved tablets. One-third of cases treated involved children below the age of fifteen years, and the "literally horrifying" fact emerged that, of those children, well over 80 per cent. were five years of age or less.

The next paper, entitled "Visual Aids to the Identification of Solid Dosage Forms," was by MR. H. BURLINSON (Thomas Kerfoot & Co., Ltd.). The author reviewed the methods of identifying tablets and capsules by surface markings. He also referred to the use of "*nomen proprium*," pointing out that there were many cases in which it was not in the interests of the patient to know when certain compounds were being prescribed. There were also difficulties when box lids became interchanged. Whilst in theory the use of a code imprinted on a tablet formed an obvious means of identification, the problem was not as simple as it appeared. The use of a code should include standard non-proprietary tablets. That would entail

the setting up of a statutory authority to enforce the use of a simple code by every maker of tablets. The cost of providing special punches would be excessive when related to the comparatively small number required.

There was also the potential danger of prescribing by code numbers. The Association of the British Pharmaceutical Industry had requested members to initiate, where necessary, a house mark common to all tablets made by a particular company and to provide the Association with details about marks already in use. An extension of the scheme would be for each company to prepare colour photographs of every preparation they offered in tablet or capsule form. Those could be amalgamated into a book of reference.

During the discussion that followed. MR. W. A. L. COLLIER said he had approached the problem of identification from another viewpoint. If a patient had more than one tablet it was most important that he should be able to identify each. It was obvious that, if a "lot of tablets are unprinted," there should be an index. The problem was, moreover, an international one.

### A Doubt

DR. H. MATTHEW (Royal Infirmary, Edinburgh) questioned whether it was of such importance to identify tablets. A specific antidote was available in less than 1 per cent. of cases. The treatment of poisoning was primarily the adoption of therapeutic principles.

MR. L. V. ALLEN said that his own company (Imperial Chemical Industries, Ltd.) was willing to co-operate in any agreed system of coding if it could be shown there was a need for it. The pharmaceutical industry "would like to know the size of the problem."

MR. A. E. CORKER (Arthur H. Cox & Co., Ltd.) was of the opinion that a method of identification that was quick and reliable was needed. He did not think that an anonymous coding on tablets would increase self-medication and discounted any likelihood of abuse of prescribing.

MR. F. BERRY (Boots Pure Drug Co., Ltd.) spoke of the advantages of coding by surface markings and referred to the increased costs of production. Would the Ministry of Health pay the price? Any scheme must be made mandatory. A method of mounting reference products in 35-mm. transparency mounts was demonstrated by MR. E. R. TALLEY (Burnley, Lancs, General Hospital).

MR. T. HARRIS (Manchester Analytical Laboratories) said the real problem was one of education. There seemed to be no reason why all tablet containers should not be labelled "Danger. Keep away from children." A code system indicating treatment in cases of poisoning might be simple and useful.

Replying, MR. MCARDLE exhibited a glass container that had contained a supply of gr. 1 phenobarbitone tab-

lets. It was labelled "Chair Nails, 9d." Another patient had not merely transposed the lids from two tablet containers, but had used them to make one container. One lid was labelled "One tablet four times a day" the other "one at night."

As an example of the misuse of "*nomen proprium*," he mentioned a prescription for splints and crutches bearing that instruction. "I asked the prescriber if he wanted one or both labelled," added Mr. McArdle.

PROFESSOR C. H. GRAY (London University), who was the chairman at the session, pointed out, in commenting on Dr. Matthew's contribution, that artificial kidneys were coming more and more into use, and techniques were improving. "Because we have only a few antidotes now it does not mean we won't have more later."

DR. T. K. MARSHALL (State Pathologist, Northern Ireland) thought tablet identification was useful, but it would be wrong to go away thinking it was essential.

### Drug Taster

MR. A. P. LAUNCHBURY (Selly Oak Hospital) noted that little had been said about the use of taste or smell in identification. The B.P. described many drugs as "bitter," but that term covered a wide range of sensory reactions. The hospital pharmacist should get to know his drugs "as a wine taster knows his wines."

MR. J. E. JEFFRIES (Pfizer, Ltd.), pointed out the practical problems of printing on capsules and tablets and the inherent difficulties in using coloured tablet cores.

MR. P. A. SWINBURNE (Queen Victoria hospital, East Grinstead, Surrey) had found labelling with a code based on the page number of the British National Formulary, 1963, and the number of the preparation on the page a useful procedure.

The use of skillets and cardboard boxes "that rapidly disintegrate" was criticised by MR. P. CREES (Dudley Road Hospital). Dealing with some of the points that had been raised, MR. MCARDLE said that speakers were "making heavy weather of the plain tablet." In his experience it rarely gave rise to difficulties. He severely criticised the use of "Co" in Co-tabs, and mentioned the likelihood of confusion with the pharmaceutical contraction for "compound." He agreed with the criticism expressed about the use of poor-quality tablet boxes and cartons, and thought too many prescriptions were being issued for large quantities of tablets.

MR. BURLINSON caused amusement when he read out a letter suggesting that tablets should include a core of zirconium oxide in a latex base, the shape of the core being determined by the pharmacological action of the drug in the tablet. If poisoning occurred, "one could take an x-ray and look at the shape. . ."

(To be concluded)



## TRADE REPORT

The prices given are those obtained by importers, or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are in many instances augmented before wholesale dealers receive the goods into stock. Crude drugs and essential oils vary greatly in quality and higher prices are charged for selected qualities.

LONDON, MARCH 24: A considerable fall in the price of Jamaican GINGER provided one of the few features in the CRUDE DRUGS market during the week.

The spot value of No. 3 fell to 430s. per cwt. from 490s. as origin dropped its price to around 415s. (from 470s.); the African variety was also 10s. lower on the spot. The value of PERU BALSAM appreciated still further during the week, ranging from 22s. to 25s. per lb. (from 18s. to 20s.). COPAIBA BALSAM was, at 11s. 6d. per lb., dearer by one shilling, but Portuguese ERGOT was reduced by a similar amount. Forward rates for CINNAMON QUILLS were adjusted downwards on new crop values. Chinese MENTHOL was threepence lower in both positions, but Brazilian was unchanged. PEPPER inclined to ease and there were some Zanzibar CHILLIES offered on the spot after an absence of several weeks. Colombian IPECACUANHA was 1s. 6d. per lb. lower for shipment. Small parcels of Alexandria SENNA PODS were reported to be arriving. In the case of Tinnevely senna, the Indian Government propose to introduce new regulations governing the export of senna. The control should have come into force on April 1, but it is understood that the Senna Exporters' Association have filed a writ petition in the High Court of Madras so that it will now take about one year to enforce the new rule. According to the new regulations, exporters will have to obtain a quality certificate from the marketing officer appointed by the Government for that purpose. Such a rule has already been in force for the export of CARDAMOMS and CHILLIES. Shipments from Tuticorin during February were as follows:—

	U.K. tons	U.S. tons	EUROPE tons
SENNA			
LEAVES	—	9	31
PODS	5	—	37

Ceylon CITRONELLA OIL was three-half-pence per lb. cheaper on the spot, whilst that of Far-eastern origin was slightly lower for shipment. Chinese PEPPERMINT was three-pence dearer and Brazilian three-half-pence up on the previous week's value. Lower per lb. were PETITGRAIN by one shilling, Madagascar CLOVE LEAF by three-half-pence and BERGAMOT by about ten shillings. Penang PATCHOULI values were nominal both spot and forward.

Further information on the Spanish OLIVE OIL market was that the Spanish Government would fix an export quota for a period of two months and would also raise the export taxes. As the export quota is small, there would have to be arrangements whereby quantities based on previous purchases were allocated to export firms.

With MERCURY up another £10 per 76-lb. flask, it would seem that the price of MERCURIALS will be raised once again as the metal has now risen £20 since the last review was made. As forecast last week, BISMUTH SALTS have been raised, the new schedules, which are given below, show that CARBONATE has risen by about 12s. per kilo.

### Pharmaceutical Chemicals

Where material is of foreign origin prices below may be subject to import surcharge.

ACETIC ACID.—Per ton. in bulk; B.P.C. glacial £80 to £84; 98–100 per cent. £76 to £80. Technical 80 per cent. grades: Pure £70 to £74; technical. £64 to £68. Small lots B.P.C., 5-gall. demijohn. 16s. per gall.; 10 demijohns, 11s. per gall.

ACETYL SALICYLIC ACID. — One-ton lots, 4s. 0½d. per lb.; 5-cwt., 4s. 5d.; 1-cwt., 4s. 8d.

p-AMINOSALICYLIC ACID. — SODIUM. 17s. 6d. per kilo for 1,000-kilo lots.

AMMONIUM ACETATE. — Kegs (70-kilos). B.P.C. 1949. 8s. 1d. per kilo. SOLUTION, strong, 3s. 6d. kilo.

AMMONIUM BICARBONATE.—B.P. powder £54 10s. per ton; CARBONATE, £83 10s. for lump and £87 10s. for powder. All in 1-cwt. free kegs.

AMMONIUM CHLORIDE.—50-kilo lots pure powder, 2s. 1d. per kilo.

AMMONIUM NITRATE.—Crystals, 1s. 8d. per kilo in 50-kilo lots.

AMMONIUM SULPHATE.—50-kilo lots, 2s. per kilo for B.P.C. 1934 grade.

BENZOIC ACID.—One cwt., 2s. 10d. per lb.; SODIUM SALT, 2s. 7d. per lb.

BISMUTH SALTS.—Prices (per kilo):

Quantity	Under 50		50		250	
	s.	d.	s.	d.	s.	d.
CARBONATE ...	62	10	61	0	60	0
SALICYLATE ...	60	10	59	0	—	—
SUBGALLATE ...	56	10	55	0	—	—
SUBNITRATE ...	57	10	56	0	55	0

BORAX.—B.P. grade, 1 ton and upwards: Granular, £54 10s.; crystals, £58; powder, £59; extra fine powder, £60 per ton, all in hessian sacks. Less £1 for paper bags. Commercial from £44 10s. to £51 per ton as to type and packing. Anhydrous borax is £68 1s. per ton in hessian bags or £67 1s. in paper bags, including import surcharge; carriage paid in Great Britain. Surcharges for small quantities: Less than 1 ton but not less than 10 cwt., 2s. per cwt.; 5 to 9 cwt., 4s.; 1 to 4 cwt., 8s.

BORIC ACID.—B.P. grade in 1-ton and upwards (per ton): Granular, £84; crystals, £97; powder, £90 10s.; extra-fine powder, £92 10s. per ton in lined hessian bags, carriage paid in Great Britain. Less £1 per ton if supplied in paper bags. Technical from £70 to £80 10s. per ton according to type and packing.

CITRIC ACID.—Domestic powder in bags, per cwt. 1–4 lots, 214s.; 5–19 cwt., 212s.; 1 ton, 208s. Crystals plus 10s. cwt. ANHYDROUS powder and granular plus 10 per cent. All less 7s. cwt. if in bags.

FUMARIC ACID.—Food grade in 5-cwt. lots is 227s. to 234s. per cwt. according to container.

GALLIC ACID.—B.P., 11s. 9d. per lb. for 1 cwt. lots; 5-cwt. 11s. 6d.

GLYCYRRHETINIC ACID.—Per oz., 50s.

HYDROCHLORIC ACID.—B.P. 50s. per cwt. in carboys.

HYDROCYANIC ACID.—Dilute B.P.C. 1954, from 4s. to 4s. 7d. per litre, as to quantity; Scheele's from 4s. 9d. to 5s. 4d.

HYPOPHOSPHOROUS ACID. — B.P.C., 1959, 15s. 5d. per kilo; 50 per cent., 19s. 3d.

LACTIC ACID. — B.P. 4s. 5d. per lb. for 12-winchester lots and 4s. for 5-cwt. lots. Edible, 80 per cent. acid, 2s. 4d. per

lb. for under 1-ton lots; 12-winchesters 2s. 8d. per lb.

MALIC ACID.—One-ton lots £190 in paper sacks.

MANDELIC ACID.—One-cwt. lots, 12s. 6d. per lb. CALCIUM SALT, a'so 12s. 6d. SODIUM MANDELATE, 13s. and AMMONIUM MANDELATE 50 per cent. solution, 7s. 6d.

MERCUROCHROME. — 5-kilo lots are 102s. 6d. per kilo.

OLEIC ACID.—B.P. grade, £186 10s. per ton; 1-gal. lots, 22s. 8d.

OXALIC ACID.—Manufacturers' rates for 4-ton lots, £153 per ton.

PHOSPHORIC ACID — B.P. (s.g. 1.750 drums, 1s. 4d. per lb.; bottles from 4s. 7d.

PYROGALLIC ACID. — One-cwt. pure crystals, 27s. 9d. per lb.

SALICYLIC ACID. — 5-cwt. lots, 3s. 2½d. per lb.

SULPHURIC ACID.—Ninipence to 1s. 2½d. per lb. in winchesters.

TANNIC ACID.—The B.P. fluffy, 8s. 9d. per lb. (5-cwt. lots) and powder, 8s. 6d.

TARTARIC ACID. — (In kegs): 1-ton lots, 275s. net cwt.; 5–19 cwt., 281s.; 1–4 cwt., 284s. Bags 8s. cwt. less. Crystals 7s. per cwt. more than powder and granular.

THIOGLYCOLLIC ACID. — Basic rates per lb., 97–98 per cent., 26-lb. racks, 15s.; 75 per cent. 11s. 6d. AMMONIUM THIOGLYCOLLATE, 40 per cent. pH 9.3 (24-lb racks), 6s. 8d.; MONOETHANOLAMINE THIOGLYCOLLATE, pH 9.9 4 per cent., 9s. 10d. All carriage paid United Kingdom and subject to purchase tax.

### Industrial Chemicals, Solvents

ACETALDEHYDE. — The 100 per cent. is £122 per ton minimum 1-ton lots.

ACETATES. — Per ton, spot in drums: AMYL, technical, £254 and B.S.S., £256. BUTYL, £136; ETHYL, £113; ISOBUTYL, (80 per cent.), £111 and pure, £115; ISOPROPYL, £110; METHYL, 80 per cent., £142.

ACETIC ANHYDRIDE. — 12-ton lots £103 per ton; 2½-ton, £107, tanker delivery.

ACETONE. — One-ton lots spot £66 per ton in drums.

N-BUTYL ALCOHOL. — One-ton lots in drums, £127 per ton and one-drum lots, £136 per ton.

CARBON TETRACHLORIDE. — In 40-gall. drums, 1 ton and under 2 tons, £83 15s.; 4 tons and upwards, £82 5s.

ISOPROPYL ALCOHOL. — Technical grade (99 per cent.) in tank car lots from 4s. 6d. to 4s. 8d. per gall.; anhydrous in drums, 7s. 1d. to 7s. 4½d. per gall.; in bulk, 6s. 11d. to 7s. 1d.

METHYL ETHYL KETONE. — One-ton lots, £111 10s. per ton.

NAPHTHALENE. — Contract rates for phthalic grade are from £25 per ton in bulk, ex works; lower crystallising whizzed grades from £20 to £25 per ton ex works; ball and flake, £71.

PHTHALATES. — Prices (per ton) one-ton lots in drums: Di-BUTYL, £163; Di-ISO-BUTYL, £158; Di-ETHYL, £171; Di-METHYL, £161.

PHTHALIC ANHYDRIDE.—Domestic material ex contract, £90 per ton; spot, £115.

SODA ASH.—Four-ton lots, from 300s. per ton delivered.

STEARATES.—Minimum 1-ton lots, ALUMINIUM (No. 1), £238 10s. per ton and (non-gel.), £276; CALCIUM (precipitated), £238 10s.; LEAD (30 per cent.), £240; MAGNESIUM (standard), £252 and (super-fine), £282, ZINC, £241 to £271 as to grade.



## Crude Drugs

ACONITE. — Spot, Spanish, *napellus*, 2s. 4d. per lb.; shipment, 2s. 3d., c.i.f.

AGAR. — Kobé No. 1, 13s. per lb. in bond; shipment, 12s. 6d., c.i.f. Spanish, 15s. to 15s. 6d., duty paid.

ANISE. — Chinese STAR, 155s. per cwt. spot, duty paid; f.a.q. for shipment, 155s., c.i.f.

ANNATTO.—Madras f.a.q. seed quoted at 260s. per cwt., c.i.f., March-April shipment.

ARROWROOT. — St. Vincent from 1s. 3d. to 1s. 6d., as to grade.

BALSAMS. — Per lb.: CANADA: Spot 21s. 6d. to 25s. COPAIBA: B.P.C. 11s. 6d. PERU: From 22s. to 25s. as to delivery date. TOLU: B.P., from 10s. 6d. to 27s. 6d.

BAY.—LEAVES, 1s. 9d. per lb., spot.

BENZONIN.—Sumatra block spot from £20 to £33 per cwt. as to quality.

BUOHU.—New crop for shipment, 4s. 3d. per lb., c.i.f.; spot, 4s. 6d.

CALAMUS. — ROOT, 100s. per cwt., spot, 87s. 6d., c.i.f.

CAMPHOR. — B.P. powder for shipment, 5s. 8d. per lb., c.i.f.; spot, 7s. 3d.

CARDAMOMS. — Aleppy greens, spot, 20s. per lb.; shipment, 18s. 6d., c.i.f.

CASCARA. — Spot, 215s. 6d. per cwt.; shipment, 210s., c.i.f.

CHAMOMILE. — Belgian flowers quoted at 19s. per lb., spot; German type, 7s. 6d.

CHERRY BARK. — Thin natural, 2s. 3d. per lb.; shipment, 2s. 1d., c.i.f.

CHILLIES. — Zanzibar, spot 320s. per cwt.; shipment, 310s. nominal, c.i.f. Mombasa, spot, 250s., nominal.

CINNAMON.—BARK, Seychelles, 145s. cwt. spot; shipment, 117s. 6d., c.i.f. QUILLS, Ceylon (per lb., c.i.f.): 4 O's, 9s. 5d.; single, O, 8s. 6d.; quillings, 4s. 7d.

CLOVES. — Zanzibar, spot, 2s. 10½d. per lb. standard grade; shipment, 2s. 7½d., c.i.f.

COCHINEAL. — Canary Isle silver-grey, 22s. per lb.; black brilliant, 22s. to 25s. Peruvian silver-grey, 18s. spot, nominal.

COCILLANA.—Bark 1s. 6d. per lb. on the spot.

DIGITALIS.—*Purpurea* leaves, 2s. 6d. per lb.

ELEMI. — Spot, 1s. 9d. per lb.; shipment: new crop, 1s. 6d., c.i.f.

ERGOT. — Portuguese, easier at 12s. per lb. spot and shipment, 10s. 6d., c.i.f.

GENTIAN. — Root, 195s. per cwt. spot; shipment, 190s., c.i.f.

GINGER.—(Per cwt.) African, spot, 290s. per cwt.; new-crop for April-May, 270s., c.i.f. Jamaican No. 3 spot, 430s.; March-April shipment, 415s., c.i.f. Cochin, March-April shipment, 270s., c.i.f.

HENNA. — Indian, for March shipment, 65s., c.i.f.

HONEY. — (Per cwt.). Australian light amber, spot 115s. to 120s.; and medium amber, 110s. to 115s.; Argentine, 115s. to 120s.; Canadian, 170s. to 175s.; Mexican spot, 125s. to 130s.

IPECACUANHA.—Matto Grosso for shipment, 56s. per lb., c.i.f. and spot, 60s. Colombian, 56s., c.i.f.; spot, 62s. Costa Rican 75s., c.i.f. and 81s., spot.

KARAYA.—No. 1 f.a.q. gum, spot, 415s.; No. 2, 300s. per cwt.

KOLA NUTS.—African, spot, 6½d. per lb., nominal; shipment, 5½d., c.i.f.

LANOLIN. — ANHYDROUS B.P., is from 2s. 3d. to 2s. 6d. per lb. in 1-ton lots delivered free drums. Commercial grades from 1s. 8d.

LEMON PEEL.—Spot, 1s. 9d. per lb.; partially extracted, 1s.

LOBELIA.—Dutch on the spot offered at 6s. 6d. per lb.

MACE.—Whole pale blade, 14s. per lb. for forward delivery.

MENTHOL.—(Per lb.). Chinese for shipment, 22s., c.i.f.; spot, 23s. in bond. Brazilian for shipment, 21s. to 21s. 3d., c.i.f.; spot, 23s. to 23s. 6d., in bond, as to brand.

MERCURY. — Spot nominally £190 per flask of 76-lb. ex warehouse.

NUTMEGS.—(Per lb.). West Indian, spot, 80's, 9s. 6d. nominal; 110's, 7s. 6d.; defectives, 5s. 6d. East Indian for shipment, 80's, 8s. 6d.; 110's, 7s. 4d., b.w.p., 4s. 5d., c.i.f.

ORANGE PEEL. — Spot: Sweet ribbon, 1s. 8d. per lb., bitter quarters: West Indian, 10½d.; Spanish, 1s. 9d.

PEPPER. — White Sarawak spot from 3s. to 3s. 3d. per lb.; shipment, 2s. 11½d., c.i.f. Black Sarawak spot, nominally 3s. 2d. Shipment, 2s. 10½d., c.i.f. Back Maabar spot, 3s. 6d. per lb.; shipment quoted at 355s. per cwt., c.i.f.

PODOPHYLLUM.—Spot per cwt.: *Emodi*, 235s. (225s., c.i.f.).

QUILLAIA.—For shipment, 100s. per cwt., c.i.f.; spot, 120s.

RHUBARB.—Manufacturing grades offered at from 5s. to 8s. 6d. per lb.; other grades at 12s. 6d. and 15s. 6d.

SAFFRON. — Mancha superior spot 625s. to 650s. per lb. as to holder. Replacements quoted up to 700s.

SARSAPARILLA. — Jamaican native red spot, 3s. 6d. per lb.; shipment, 2s. 11d., c.i.f.

SEEDS. — (Per cwt.) ANISE. — Spanish, 215s., duty paid. CARAWAY. — Dutch, 132s. 6d., duty paid. CELERY.—Indian, 195s., spot; shipment, current crop, 167s. 6d., c.i.f.; new crop for June-July, 172s. 6d., c.i.f. CORIANDER.—Moroccan spot, 56s. 6d., duty paid; shipment Moroccan, 43s. 6d., c.i.f. Rumanian whole seed, 52s. 6d., c.i.f. CUMIN.—Cyprian, 345s., spot, Moroccan, 340s., duty paid; Indian to arrive, 340s., landed terms. Shipment: Cyprian, 325s., Moroccan, 290s. and Indian, 260s., all c.i.f. DILL.—Indian, 110s. spot; shipment, 87s. 6d., c.i.f. FENNEL.—Chinese, 120s. to 150s., duty paid as to quality; Indian, 200s., nominal; shipment Chinese, 110s., c.i.f. and Indian quoted at 160s., c.i.f. FENUGREEK. — Moroccan, 45s. 6d., duty paid; shipment, afloat sold at 34s. 6d., c.i.f. and April shipment at 34s., c.i.f. MUSTARD.—English, 55s. to 80s., according to quality.

SENEGA.—Spot, 19s. 6d. per lb.; shipment, 19s., c.i.f.

SENNA. — (Per lb.) Tinnevely LEAVES spot: Prime No. 1, 2s.; prime No. 2, 1s. 8d.; No. 3, f.a.q., 1s. 2d. Shipment: No. 3, 1s., c.i.f. PODS: Tinnevely hand-picked, 2s. 1½d., spot, manufacturing 1s. 2d.; shipment, 11d., c.i.f. Alexandria PODS: small parcels now arriving of hand-picked at 8s. 6d. and 10s.; manufacturing, forward, 2s. 10d., c.i.f.

SHELLAC. — F.O.T.N. pure, 216s. per cwt.; Standard No. 1, 235s.; F.O., from 260s. to 320s.

SLIPPERY ELM BARK. — Spot offered at 3s. 4d. per lb.

STYRAX.—Spot, 13s. 6d. per lb.; shipment, 13s. 3d., c.i.f.

TONQUIN BEANS.—Para spot, 4s. 6d. per lb.; shipment, 3s. 10d., c.i.f.

TRAGACANTH.—No. 1 ribbon, £207 10s. per cwt. No. 2, £192 10s.

TURMERIC. — Madras finger on spot is 155s. per cwt.; shipment, new crop quoted at 132s. 6d., c.i.f. for March-April.

VANILLIN. — (Per lb.) 5-cwt. lots, 21s. 6d.; 1-cwt., 21s. 9d.; 56-lb., 22s.; small quantities, 22s. 6d. All plus 1s. 10d. per lb. temporary import charge.

WITCH HAZEL LEAVES.—Spot quotations are 2s. 2d. per lb.; shipment 2s. 1d., c.i.f.

## Essential and Expressed Oils

ALMOND. — Imported sweet oil is 7s. per lb. spot.

BAY.—West Indian, 35s. per lb. on the spot.

BERGAMOT.—Spot quotations for best oil are from 90s. per lb.

CAJUPUT.—Spot from 10s. per lb.

CALAMUS.—Spot, from 70s. to 120s. per lb. as to origin.

CAMPHOR, WHITE. — Chinese for shipment, 4s. 6d., c.i.f., per kilo; spot, 6s.

CARDAMOM.—English distilled, 375s. per lb.

CASSIA.—Spot from 55s. per lb. for 80-85 per cent.

CINNAMON.—Best English-distilled, 720s. per lb.; other B.P. oils from 22s. to 120s. per lb. Ceylon leaf, 22s.; Seychelles from 9s., spot.

CITRONELLA. — Ceylon, spot, 6s. 3d.; shipment, 5s. 7½d. per lb. c.i.f.; Formosan, 4s. 9d., in bond; shipment, 4s. 7d., c.i.f.; Chinese, 4s. 6d., c.i.f., spot, 4s. 8d.

CLOVE.—Madagascar leaf for shipment, 5s. 9d., c.i.f.; spot, 6s. 1½d., in bond. Rectified, 10s. Distilled bud-oil, ENGLISH B.P., 26s. per lb. for 1-cwt. lots.

CORIANDER.—From 34s. to 45s. per lb., spot, as to origin.

CUBE.—Spot supplies of imported are 86s. per lb.

CUMIN.—English distilled oil, 125s. per lb., imported, 90s. to 120s.

EUCALYPTUS. — B.P. 70-75 per cent., 5s. 9d. per lb.; 80-85 per cent., 6s. 6d.

FENNEL.—Spanish sweet, 16s. 6d. per lb., landed, duty paid.

GERANIUM. — Bourbon, 87s. 6d. to 92s. 6d., spot.

JUNIPER. — B.P.C. is 32s. 6d. per lb. JUNIPER WOOD, from 6s.

LAVANDIN.—From 25s. to 30s. per lb. as to quality.

LAVENDER. — French, from 46s. to 57s. 6d. per lb. as to quality.

LAVENDER SPIKE. — From 30s. to 40s. per lb. as to quality. Replacements quoted around 50s. per lb.

LEMON.—Sicilian from 17s. to 26s.

LIME. — West Indian, distilled, 65s. per lb. on the spot.

PATCHOULI.—Penang is nominally 42s. 6d. per lb., in bond and 42s. 6d., c.i.f., nominal, forward.

PEPPERMINT. — *Arvensis*: Chinese for shipment, 9s. 3d., c.i.f.; spot, 9s. 3d. Brazilian for shipment, 9s. 6d., c.i.f.; spot, 9s. 6d. *Piperita*: Italian, 48s. to 60s., spot; American from 35s. per lb. as to make.

PETITGRAIN. — Paraguay for shipment, 15s. 9d., c.i.f.; spot, 16s. 9d. per lb.

RUE.—Spanish is 22s. 6d. per lb., spot.

SAGE.—Spanish, 21s. per lb.; Dalmatian 26s.

SPEARMINT.—American oil on the spot, 35s. per lb.

TANGERINE.—Sicilian best quality about 46s. per lb.

## UNITED STATES REPORT

NEW YORK, MARCH 23: The U.S.P. grade of ZINC OXIDE advanced a half-cent in boxes, to 18½ cents per lb. and to 19 cents in drums. Crude GLYCERIN quotations were lowered a half-cent to make the soap lye 11 cents per lb. and the saponification grade 12½ cents. Brazilian MENTHOL added another five cents to rise to \$3.45 per lb. Spanish SAFFRON at \$90 was up \$12. East Indian SANDALWOOD OIL dropped 75 cents to \$18.75 per lb.



## TRADE MARKS

### APPLICATIONS ADVERTISED BEFORE REGISTRATION

From the "Trade Marks Journal," March 10

For perfumes, non-medicated toilet preparations, cosmetic preparations, essential oils and soaps (3) TALOR-NAL-NEW, B850,800, by Interparfum-Kosmetik, Heilbronn/Neckar, Germany.

For soaps, perfumes, non-medicated toilet preparations, non-medicated preparations for the bath, preparations for the hair and toilet articles (3) ANDRE PHILIPPE, B846,972, by André Philippe, Ltd., London, S.W.6.

For non-medicated preparations for setting the hair by spraying (3) FASHION SET, B855,550, by Timothy Whites & Taylors, Ltd., Leeds, 4.

For perfumes, toilet preparations (not medicated), cosmetic preparations, dentifrices, depilatory preparations, toilet articles (not included in other classes), preparations for the hair, and soaps (3) ARIA, STANZA, 860,223-24, OPULA, 860,226, by L'Oreal, Paris, France.

For hair-setting lotions (3) COIFFSET, B860,225, by L'Oreal, Paris, France.

For preparations for setting the hair (3) PRAISET, 860,227, by L'Oreal, Paris, France.

For perfumes, non-medicated toilet preparations, cosmetic preparations, essential oils, soaps, dentifrices and preparations for the hair (3) INKASAN, 864,561, by Inka Cosmetic, G.m.b.H., Hanover, Western Germany.

For non-medicated toilet preparations, cosmetics, perfumes, essential oils, preparations for the hair, dentifrices, soaps and toilet articles (3) PRINCESSE D'ALBRET, B864,941, by Jean d'Albret, Paris, France.

For all goods (3) ZOTOS SCULPTURA, B865,373, by Sales Affiliates, Ltd., Boreham Wood, Herts.

For cosmetics and preparations for the hair (3) BUNNY, 867,536, by Northern Aerosols & Sachet Co., Ltd., Manchester, 12.

For shaving cream, soap, eau de Cologne, hair spray and after-shave lotion, all being non-medicated toilet preparations for men; and perfumes (3) HABIT ROUGE, 868,468, by Guerlain, Ltd., Greenford, Middlesex.

For soaps, non-medicated toilet preparations, cosmetics and dentifrices, none of the aforesaid goods being in liquid form; and perfumes (3) FJORD, 868,662, by Chater G. Chemicals, Ltd., Brentwood, Essex.

For cleaning and polishing preparations (3) ODEX DRY BRIGHT, 870,252, by Odex, Ltd., Ellesmere Port, Ches.

For perfumes, non-medicated toilet preparations, cosmetic preparations, dentifrices, depilatory preparations, toilet articles (not included in other classes), sachets for use in waving the hair, shampoos, soaps and essential oils, all being goods for sale in the United Kingdom (3) TRANCE, B870,453, by Cussons, Sons & Co., Ltd., Manchester, 7.

For soaps, perfumes, non-medicated toilet preparations; essential oils, cosmetics, hair lotions and shampoos (3) SEBRIL, 871,081, by David Oliver Holland, Dorking, Surrey.

For surgical tape (5) BLENDERM, 836,763, by Minnesota Mining & Manufacturing Co., Saint Paul, Minnesota, U.S.A.

For adhesive material made of plastics, for use in abdominal surgery (5) STOMOSEAL, B836,767, by Minnesota Mining & Manufacturing Co., Saint Paul, Minnesota, U.S.A.

For all goods (5) Device, 856,811, by Nagaoka Jitsugyo, K.K., Kobe, Japan. NOVOTRIAD, B869,414, by May & Baker, Ltd., Dagenham, Essex. NEO-LEDERCORT, 869,431, by American Cyanamid Co., Wayne, New Jersey, U.S.A. INTENSOL, 870,334, by Anasco Arznei-Und Gesundheitspflegemittel, G.m.b.H., Wiesbaden, Germany. GILURYTAL, 870,985, by Gebrüder Giuliani, G.m.b.H., Ludwigshafen-on-Rhine, Germany. RHEOTRAN, 871,297, by Knoll, A.G., Ludwigshafen-on-Rhine, Germany.

For all goods for use by injection (5) SNAPJECT, 865,427, by Evans Medical, Ltd., Liverpool, 24.

For cough pastilles (5) THREE NOUGHTS, 855,597, by Carter & Sons (Sheffield), Ltd., Sheffield, 4.

For sanitary pants, sanitary briefs, sanitary towels and sanitary belts (5) Device with word NETTI, B861,166, by Sigrun Marie Bech, Aarhus, Denmark.

For pharmaceutical products for the treatment of retarded growth, fractures, metabolic disorders, skin loss, ulcerous digestive affections, denutrition, cachexy, ethylic cirrhosis, and for use in geriatrics (5) CHOAY SOMATO D, B867,912, by Laboratoire Choay, Paris, France.

For pharmaceutical substances and preparations, all for the treatment and prophylaxis of haemorrhoids (5) HAEMOLINGAL, 868,187, by Pharmakon, A.G., Zurich, Switzerland.

For medicated beverages (5) CERINA, 869,757, by Beecham Group, Ltd., Brentford, Middlesex.

For pharmaceutical substances and preparations (5) DIASPASYMYL, NUBALGYL, NUBARENE, 870,762-64, by Societe Industrielle pour la Fabrication des Antibiotiques (S.I.F.A.), Paris, France.

For pharmaceutical substances for use in treating and inhibiting disturbances of the cardiac rhythm (5) GILMALINE, 871,760, by Gebrüder Giuliani, G.m.b.H., Ludwigshafen-on-Rhine, Germany.

For photographic processing apparatus and parts and fittings, but not including lenses (9) PROSTAR, B867,254, by Kodak, Ltd., London, W.C.2.

For personal weighing machines (9) CONCORDE, B869,972, by Hollands & Blair, Ltd., Thornton Heath, Surrey.

For photographic and cinematographic cameras; darkroom apparatus; parts and fittings; and lenses (9) MICAR, 871,058, by Apparatus & Instrument Co., Ltd., Hounslow, Middlesex.

For face masks for surgical use (10) ASEPTEX, B847,334, by Minnesota Mining & Manufacturing Co., Saint Paul, Minnesota, U.S.A.

For surgical instruments and apparatus and parts, all made wholly or principally of rubber or of plastics (10) UNIVAL, 868,645, by Eschmann Bros. & Walsh, Ltd., London, E.C.1.

For all goods (29) ANDOMIA SLIMFOODS, 871,049, ANDOMIA SLIMMEAL, 871,384, by Andomia Products, Ltd., Bradford, Yorks.

For salt (for food) (30) ANDOMIA SLIMASALT, 871,050, by Andomia Products, Ltd., Bradford, Yorks.

## PATENTS

### COMPLETE SPECIFICATIONS ACCEPTED

From the "Official Journal (Patents)," March 3

Process for the production of carbostyryl derivatives, J. R. Geigy, A.G. 988,776.

Process for preparing benzimidazoles and N-phenylamide intermediates therein, Merck & Co., Inc. 988,784.

Steroid compounds, and processes for their preparation, Roussel-Uclaf. 988,803.

Physiologically active steroid compounds, processes for their preparation and compositions containing them, Roussel-Uclaf. 988,804.

Sponges, A. G. Carroll. 988,818.

Method of obtaining kinematographic picture and apparatus therefor, T. Pathe. 988,881.

Method of dyeing hair, Hans Schwarzkopf. 988,914.

Process for preparing carboxylic acids and their salts, esters, thioesters and amides, Hercules Powder Co. 988,954.

Cyano-substituted thiazole compounds, Merck & Co., Inc. 988,956.

Skin packaging, Gala Cosmetic Group, Ltd. 988,987.

Apparatus for tubular film process, Hercules Powder Co. 989,020.

Aerosol preparation, Norwich Pharmacal Co. 989,036.

Method of treating bottle corks, F. Gültel. 989,102.

Electrodialysis, John Thompson-Kennicott, Ltd. 989,131.

Benzimidazole derivatives and process for making them, T. J. Smith & Nephew, Ltd. 989,191.

Veterinary composition for the treatment of coccidiosis, Olin Mathieson Chemical Corporation. 989,253.

Process for the preparation of N-(5-nitro-furfurylidene)-1-amino-hydantoin, C. F. Boehringer & Soehne. 989,332.

Steroid compounds and processes for their preparation and conversion into pharmacologically useful compounds, Roussel-Uclaf. 988,801.

Steroid compounds, processes for their preparation, and compositions incorporating them, Roussel-Uclaf. 988,80.

Disposable syringes, Lovers Kemiske Fabrik Produktionsaktieselskab. 988,826.

Surgical pad, Scholl Manufacturing Co., Ltd. 988,827.

Nitrogen-containing heterobicyclic compounds, G. D. Searle & Co. 988,830.

Range and view finders, Soc. d'Optique et de Mécanique de Haute Précision. 988,879.

Penicillins, Lepetit, S.p.A. 988,933.

$\gamma$ -disubstituted propionic acids and their derivatives, Lepetit, S.p.A. 988,934.

Carbamyl thio phosphate compounds, Stauffe Chemical Co. 988,950.

Coloured photographic images, Agfa, A.G. 988,967.

Substituted 3-trichloromethylthio-1,3,4-oxa- (o-thia) diazoles, Rhone-Poulenc, S.A. 988,974.

Colloidal particles, sols containing them and processes for the preparation thereof, W. R. Grace & Co. 988,982.

Process for polymerization of olefins, Rexal Drug and Chemical Co. 988,999.

Detergent bar, Procter & Gamble Co. 989,007.

Thiophosphonates and compositions containing the same, Monsanto Co. 989,014.

Pyrido (2,3-d) pyrimidines, Mead Johnson & Co. 989,048.

Stable oral poliomyelitis vaccines and process for preparing them, Behringwerke, A.G. 989,077.

Orthopaedic cushioning pads, Scholl Manufacturing Co., Ltd., and L. C. Lowth. 989,098.

Method of and apparatus for batch packing of articles such as bottles, jars or the like of the kind closed by a capsule, B. Agerberg. 989,108.

Solvent compositions, Imperial Chemical Industries, Ltd. 989,155.

Hypodermic syringes, Glaxo Group, Ltd. 989,185.

Diphenylamine derivatives and their application, United States Rubber Co. 989,215.

Carton closures, General Mills, Inc. 989,231.

Novel hydrazine derivatives and a process for the manufacture thereof, F. Hoffmann-La Roche & Co., A.G. 989,259.

Bromohydrin preparation, Organon Laboratories, Ltd. 989,320.

Formation of pockets of particulate substance, Procter & Gamble, Ltd. 989,350.

Aqueous dispersions, O. W. Burke. 989,372.

Photographic developing compositions, Gevaert Photo-Producten, N.V. 989,383.

3-Hydroxypyrido (2,3-e)-4S-triazine-oxide and related compounds, Abbott Laboratories. 989,397.

Method of obtaining tetracycline, Instytut Antibiotykow. 989,406.

British patent specifications relating to the above will be obtainable (price 4s. 6d. each) from the Patent Office, 23 Southampton Buildings, Chancery Lane, London, W.C.2, from April 14.

From the "Official Journal (Patents)," March 10

Thiophosphonates and compositions containing same, Monsanto Co. 989,443.

Cytosine derivatives and the manufacture thereof, F. Hoffmann-La Roche & Co., A.G. 989,455.

Cytosine derivatives and the preparation thereof, F. Hoffmann-La Roche Co., A.G. 989,456.

Process for purifying sugar juices, Eimco Corporation. 989,468.

Preparation of fluorochlorobenzenes, Imperial Chemical Industries, Ltd. 989,504.

Substituted tetrahydrothienethiophosphates, Hooker Chemical Corporation. 989,509.

British patent specifications relating to the above will be obtainable (price 4s. 6d. each) from the Patent Office, 23 Southampton Buildings, Chancery Lane, London, W.C.2, from April 21.



CONTEMPORARY THEMES

Subjects of contributions in current medical and technical periodicals.

DRUG LITERATURE. The nature and magnitude of. *Amer. J. hosp. Pharm.*, January.  
DRUG INFORMATION. The problems associated with the dissemination and effective utilisation of. *Amer. J. hosp. Pharm.*, January.  
DRUG-INDUCED HYPERGLYCEMIA in hypertension. *J. Amer. med. Ass.*, February 15.  
A NEW ANTIGEN in leukemia sera. *J. Amer. med. Ass.*, February 15.  
DIAZEPAM in cerebral-palsied children. *J. Amer. med. Ass.*, March 8.  
ISTONES. Gene control by. *New Scientist*, March 18.  
STRATEGIC ANTHELMINTIC MEDICATION of ewes. *Vet. Rec.*, March 20.  
BENCYCLIDINE in dogs. Preliminary studies with. *Vet. Rec.*, March 20.  
MINO-OXIDASE INHIBITORS. Influence of on the psychomotor depression produced by an intraperitoneal injection of adrenaline in mice. *Nature*, March 20.  
MUNE GLOBULINS in human viral infections. *Nature*, March 20.  
LICONES. Chemical background of. *Science*, February 19.  
CRYSTALLINE HUMAN UROKINASE: some properties. *Science*, February 19.  
ISMUTH ALUMINATE AND MAGNESIUM TRISILICATE. Double-blind trial of, in peptic ulceration with simultaneous gastric analysis. *Brit. med. J.*, March 20.  
RAL RESPIRATORY STIMULANTS in chronic respiratory failure. *Brit. med. J.*, March 20.  
TECTION OF BACTERIURIA by a modification of the nitrite test. *Brit. med. J.*, March 20.  
IAZOXIDE and human growth hormone. Control of hypoglycemia with. *Lancet*, March 20.  
NEW URINARY DENSIMETER. *Lancet*, March 20.

PRINT AND PUBLICITY

PRESS ADVERTISING

BURROUGHS WELLCOME & Co., Wellcome Building, Euston Road, London, N.W.1: Saxin, In *T.V. World*, *Look Westward*, *The Viewer*, *Woman's Own*, *Woman's Realm*, *Woman's Mirror*, *Woman's Weekly* and leading provincial newspapers.  
ECTO, LTD., Inecto House, 27 Dover Street, London, W.1: Inecto Hint of a Tint, In *Woman's Own*, *Woman's Realm*, *Farmers' Weekly* and *Woman's Mirror*, Inecto Hi-Lift, In *Rave*, *Weekend*, *Jackie*, *Fabulous*, *Mirabelle*, *Marilyn*, *Valentine* and *Sunday Mirror*. Inecto Colour Creme, In *Everywoman*, *Woman & Home*, *My Home*, *Good Housekeeping*, *Housewife*, *Modern Woman*, *Woman's Weekly*, *The Lady*, *Ideal Home*, *Woman's Mirror*, *Woman's Own*, *Sunday Mirror* and *Daily Mirror*.  
YRAM PICKER, LTD., Surbiton, Surrey: Outdoor Girl curl-on mascara, In *Woman's Own*, *Woman's Mirror*, *Photoplay*, *Woman's Story*, *True Story*, *True Romances* and *Daily Mirror*.  
RICHARDS & APPLEBY, LTD., York House, West-

minster Bridge Road, London, S.E.1: Maybelline eye make-up, In *Woman's Own*, *Woman's Mirror*, *Honey*, *Fabulous*, *Vogue*, *Harper's Bazaar*, *Flair*, *Vanity Fair* and *Queen*.

SAGA OF BOND STREET, LTD., London House, Bath Road, Slough, Bucks: Misty Mani-cure,

Step up hair brightener and nail polish remover, In national newspapers and women's magazines.

TONI CO., division of Gillette Industries, Ltd., Trevor House, 100 Brompton Road, London, S.W.3: Tame creme rinse, In women's magazines.

COMING EVENTS

Items for inclusion under this heading should be sent in time to reach the Editor not later than first post on Wednesday of the week of insertion.

Monday, March 29

INTERNATIONAL AUTOMATIC VENDING EXHIBITION, Earls Court, London, S.W.5, Until April 2.  
LABORATORY APPARATUS AND MATERIALS EXHIBITION (LABEX), Earls Court, London, S.W.5, Until April 2.  
NOTTINGHAM BRANCH, PHARMACEUTICAL SOCIETY, 64 St. James's Street, Nottingham, at 7.30 p.m., Mr. D. I. McCallum on "Skin Response to Therapeutic Agents."

Tuesday, March 30

PESTICIDES GROUP AND COLLOID AND SURFACE CHEMISTRY GROUP, SOCIETY OF CHEMICAL INDUSTRY, School of Pharmacy, University of London, Brunswick Square, London, W.C.1. Symposium on "Formulation of Pesticides," Until March 31.  
SOCIETY OF COSMETIC CHEMISTS OF GREAT BRITAIN, Cosmetic Industry Exhibition and symposium on "Emulsions," Harrogate, Yorks, Until April 1.  
WEMBLEY BRANCH, PHARMACEUTICAL SOCIETY, Town hall, Wembley, at 8 p.m. Annual meeting followed by Mr. J. Turner (vice-chairman, Middlesex Pharmaceutical Committee) on "The Work of the Middlesex Pharmaceutical Committee."  
WOKING BRANCH, PHARMACEUTICAL SOCIETY, Red House hotel, Woking, at 8 p.m. Annual meeting followed by Mr. H. G. Moss (chairman, Central N.H.S. (Chemist Contractors) Committee) on "Scale of Professional Fees."

Wednesday, March 31

BOURNEMOUTH BRANCH, PHARMACEUTICAL SOCIETY, Cornelia nurses' hostel, Poole, at 1 p.m. "The Inner Eye" (film).  
DEPARTMENT OF SCIENCE AND METALLURGY, SHEFFIELD COLLEGE OF TECHNOLOGY, Pond Street, Sheffield, 1, at 7.30 p.m., Mr. J. W. Hadgraft (group chief pharmacist, Royal Free Hospital, London) on "Percutaneous Adsorption and Ointment Bases."  
NEWCASTLE AND NORTHUMBERLAND BRANCH, PHARMACEUTICAL SOCIETY, Mayfair ballroom, Newgate Street, Newcastle-on-Tyne, at 7.30 p.m. Annual dinner and dance.  
SOMERSET BRANCH, NATIONAL PHARMACEUTICAL UNION, County hotel, Taunton, at 8 p.m., Mr. W. Talvan Rees (Vice-chairman, N.P.U.) on "What's Going On at Queen Square."

Thursday, April 1

BRADFORD BRANCH, PHARMACEUTICAL SOCIETY, Midland hotel, Bradford, at 7.45 p.m. Annual meeting.

BRITISH MEDICAL ASSOCIATION, Dundee. Annual meeting, Until April 3.  
FINCHLEY BRANCH, PHARMACEUTICAL SOCIETY, Mermaid theatre, Upper Thames Street, London, E.C.4, at 7 p.m. Dinner and theatre visit.  
WORTHING AND WEST SUSSEX BRANCH, PHARMACEUTICAL SOCIETY, Cricketers' hotel, Broadwater, at 8 p.m. Annual meeting followed by Mr. H. E. Margetson on "The Four Seasons" (illustrated).

Friday, April 2

HOUNSLOW BRANCH, PHARMACEUTICAL SOCIETY, Osterley hotel, 764 Great West Road, Isleworth, at 7 p.m. Dinner and dance.  
MANCHESTER SECTION, SOCIETY OF CHEMICAL INDUSTRY, Manchester Literary and Philosophical Society, 36 George Street, Manchester, at 6.30 p.m., Professor A. J. Birch on "Total Synthesis of Sex Hormones and Analogues."  
MERSEYSIDE BRANCH, NATIONAL ASSOCIATION OF WOMEN PHARMACISTS, Stork hotel, Queen's Square, Liverpool, at 7.30 p.m. Address by member of the Merseyside Cancer Education Committee.  
WALLASEY PHARMACISTS' ASSOCIATION, Seacombe Ferry hotel, Seacombe, Wallasey, at 7 p.m. Informal dinner.

Sunday, April 4

NOTTINGHAM PHARMACISTS' GOLFING SOCIETY. Meeting at Hollinwell golf course, Notts. 2 p.m.

Advance Information

BRITISH VETERINARY ASSOCIATION, Edinburgh. Annual congress, September 12-18.  
NATIONAL ASSOCIATION OF WOMEN PHARMACISTS, Bonnington hotel, Southampton Row, London, W.C.1, at 6 p.m. Dinner; 17 Bloomsbury Square, at 7.30 p.m. Annual meeting. (Members wishing to join the dinner party should inform Mrs. R. M. Clitherow, 54 Gilders, Sawbridgeworth, Herts (telephone: Sawbridgeworth 2403) by April 5.)

Courses and Conferences

BRITISH SOCIETY OF SOIL SCIENCE, London School of Economics, Houghton Street, London, W.C.2, at 10.30 a.m. Meeting on "Pesticides in the Soil." April 13. Fee: members 2s, 6d., non-members, 5s (Secretary: Dr. D. V. Crawford, School of Agriculture, University of Nottingham, Sutton Bonington, Loughborough, Leics.)

Advertisement for Coty and Glymiel products. The left side shows a Coty Dew Fresh Lipstick box and a display of various lipsticks. The middle section features a Glymiel Jelly advertisement with a woman's face and the text "for the care of your hands". The right side displays several tins of Andrews Liver Salt, with the text "Springtime Feeling" and "FOR INNER CLEANLINESS".





## What doctors are reading about developments in drugs and treatments

BISMUTH aluminate (Bislumina) has shown a "clear clinical advantage" over magnesium trisilicate in the management of patients with peptic ulceration. Workers at the Royal Hospital, Wolverhampton, report a double-blind comparison of the two drugs in which therapeutic benefit was assessed, with simultaneous gastric juice analysis. Although considerable therapeutic benefit was seen with both compounds, neither had any great effect on the pH or the pepsin activity of the gastric juices. The authors therefore suggest that the mechanism of the action of the bismuth aluminate may be a local coating action. They consider that that may fit into current views on the causation of peptic ulcer, by increasing the tissue-resistance component of the equation acid-pepsin versus the defensive powers of the mucosa. (*B.M.J.*, March 20, p. 753.)

A LEADING article in the *British Medical Journal* calls on the Home Office to issue a statutory instrument to "stop the gap" whereby wholesalers may sell certain drugs (including dexamphetamine) which appear in the Poisons List to retailers, even though the retailer is not himself an authorised seller of poisons. "In the longer view a complete re-writing of the 1933 [Pharmacy and Poisons] Act and its dependent regulations is desirable to make the statutory controls comprehensible to those affected by its provisions" (*B.M.J.*, March 20, p. 739).

Two oral respiratory stimulants (amiphenazole and dichlorphenamide) have been studied in the department of therapeutics and pharmacology, Queen's

University, Belfast, for their effect in chronic respiratory failure. Neither drug was found to produce any symptomatic improvement in the twelve patients included in the double-blind trial, all of whom were disabled with chronic bronchitis, but ambulant. Each patient took the two active drugs and a placebo in three consecutive fortnights. Amiphenazole produced no significant improvement in the blood gases whereas dichlorphenamide produced a "marked 'biochemical' improvement without affecting the patient's symptoms." However, the latter drug produced a high incidence of side effects and its use only under close supervision is recommended. (*B.M.J.*, March 20, p. 759.)

A COMBINATION of diazoxide (supplied by the Schering Corporation) and bendroflumethiazide has been found by United States workers to be effective in maintaining blood-glucose concentrations within the normal range in a patient with a functioning pancreatic islet-cell carcinoma. Diazoxide was being assessed for its value in that condition because human growth hormone, already found effective, is scarce. Its mode of action appears, however, to differ from that of H.G.H. (*Lancet*, March 20, p. 628).

THE following comments on drugs appear in *Drug and Therapeutics Bulletin*: BETADINE (povidone-iodine). Less effective than alcoholic iodine for immediate disinfection of the skin, but it irritates the skin much less and does not stain. At least as good as hexachlorophane for use on surgeons' hands for procedures lasting an hour or two, though that may not be true for longer

operations. PENTOVIS (quinestradol). Appears to have advantages over more conventional estrogens when atrophic vaginitis continues or relapses despite full investigation and treatment. NEFROLAN (clorexolone). Properties hardly justify its introduction as a hypotensive agent or as a general-purpose diuretic. In the limited field of long-acting diuretics has the advantage of costing less than chlorthalidone. (*D. & T.B.*, March 19.)

## NEW COMPANIES

P.C.=Private Company. R.O.=Registered Office.  
DEACON STREET PHARMACY, LTD (P.C.).—Capital £100. Subscribers: Shirley Hart and Averill Hart. R.O.: 74 Deacon Street, London, S.E.17.

W. F. DOWNES, LTD. (P.C.).—Capital £5,000. To carry on the business of chemists and druggists, etc. Directors: Frank Downes, M.P.S., Dorothy M. Downes and Geoffrey F. Downes. R.O.: 97 Manchester Road, Altrincham, Ches.

DUNCAN & ROBERTS (CROSSKEYS), LTD (P.C.).—Capital £1,000. To carry on the business of general chemists and druggists, opticians, etc. Subscribers: Roy C. Keen and G. A. Corderoy. 116 Chancery Lane, London, W.C.2.

GOODMAN (CHEMISTS), LTD. (P.C.).—Capital £5,000. To carry on the business of retail chemists, etc. Directors: Sarah Goodman and Sarah A. Goodman. R.O.: 40 Preston Road, Brighton.

HORNCHURCH CHEMISTS, LTD. (P.C.).—Capital £2,000. To carry on the business of wholesale and retail chemists and druggists, etc. Subscribers: Alan R. Ritchie, M.P.S., Bar Lodge, Stock Road, Billericay, Essex, and Albert L. Shaw.

KENSAL PHARMACY, LTD. (P.C.).—Capital £100. To carry on the business of chemists, etc. Directors: Hannah Levy and Gerald Levy, M.P.S. R.O.: 6 Cavendish Square, London, W.1.

S. S. MILLER & CO., LTD. (P.C.).—Capital £100. To carry on the business of chemists and druggists, etc. Subscribers: Shirley Hart and Averill Hart. R.O.: 34 South Molton Street, London, W.1.

STAHL CHEMICALS (G.B.), LTD. (P.C.).—Capital £100. To carry on the business of chemists, etc. Subscribers: John R. Simpson and Christopher R. Simpson, 11 Bowling Green Street, Leicester.

R. & M. RANDALL, LTD. (P.C.).—Capital £100. To carry on the business of chemists, etc. Directors: Raymond A. Randall and Moll Randall, 6 Park Crescent, Forest Row, Sussex.

## COMMERCIAL TELEVISION

The information given in the table is of number of appearances and total screen time in seconds. Thus 7/105 means that the advertiser's announcement will, during the week covered, be screened seven times and for a total of 105 seconds.

Period April 4-10	London	Midland	North	Scotland	Wales & West	South	North-east	Anglia	Ulster	Westward	Border	Grampian	Eireann	Channel 4
PRODUCT														
Alka-Seltzer ...	7/120	2/80	4/120	3/120	4/120	5/150	4/120	4/120	4/120	4/120	6/180	3/90	3/90	4/120
Anadin ...	7/85	4/74	3/90	6/111	3/44	4/120	3/100	3/90	3/90	4/120	2/60	2/60	—	1/30
Anne French Cleansing Milk	5/50	2/60	1/30	5/58	2/60	—	1/30	—	2/30	—	—	1/30	—	—
Askit powders ...	—	—	—	12/84	—	—	—	—	—	—	3/21	4/28	—	—
Bisodol ...	—	—	4/28	5/35	—	—	—	—	5/35	—	—	4/28	—	—
Cuticura ...	2/14	2/14	2/14	2/14	—	—	—	—	—	—	—	2/14	—	—
Defrosa ...	—	—	—	—	—	2/60	—	—	—	—	—	—	—	—
Dentu-Creme ...	1/30	2/60	1/30	1/30	2/60	1/30	1/30	1/30	1/30	2/60	1/30	1/30	—	1/30
Euthymol tooth-paste	1/40	—	—	1/40	1/40	1/30	1/40	1/40	1/40	—	—	1/40	—	—
Farlene ...	—	—	2/90	—	—	—	—	—	—	—	—	—	—	—
Goddard's embrocation	1/15	—	—	—	—	—	—	—	—	—	—	—	—	—
Hand-e-cream ...	—	—	—	—	—	3/20	—	—	—	—	—	—	—	—
Loxene shampoo ...	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	4/120	—
Milk of Magnesia tablets	3/45	3/45	4/60	3/45	2/30	4/60	3/45	3/45	3/45	3/45	3/45	3/45	—	4/60
Moorland indigestion tablets	2/14	—	2/14	—	3/21	4/28	—	—	4/28	5/35	—	—	—	—
Poli-grip ...	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	1/30	—	1/30
SR tooth-paste ...	1/30	2/60	1/30	3/90	3/90	2/60	3/90	2/60	3/90	2/60	2/60	3/90	—	3/90
Simbix ...	—	—	2/60	—	—	—	—	—	—	—	—	—	—	—
Steradent ...	2/60	1/30	1/30	2/60	1/30	2/60	1/30	2/60	2/60	2/60	2/60	2/60	—	1/30
Swarfega ...	—	—	—	1/15	—	—	1/15	—	—	—	—	1/15	—	—
Yours Faithfully stockings	—	—	—	—	—	3/90	—	—	—	—	—	—	—	—



# cumulative price changes

## AMENDING C & D QUARTERLY PRICE LIST FOR MARCH 1965

[illegible]

# 'EMPRAZIL' BRAND tablets

## UNCOMMON RELIEF for the COMMON COLD

**BURROUGHS WELLCOME & CO. (The Wellcome Foundation Ltd.) LONDON**





Cetrimax (1232 T&R)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</
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r (291 Consolidated)				soap	100	9	25	2	15	0	1/2oz	530G	20	0ea	4	10ea	37	6								
ection 10mils 5 10 0ea				spray mist	218	6	54	1 1/2	32	6	1/2oz	530H	30	0ea	7	3ea	56	0								
10mils 50 73 9ea				talcum	80	9	20	2	12	0	1oz	530	49	6ea	12	1ea	92	6								
ere Royale (Houbigant (1 Abbey))				<b>Intoxication (1464 D'Orsay)</b>																						
ap (3) 341.26				parfum de toilette	2oz	601	11	3ea	2	9ea	21	0	atomiser	1/2oz	50A	26	0ea	6	4ea	48	6					
hizz (Lubin (1 Abbey))				2oz	602	19	0ea	4	9ea	35	6	presentation packs	1/2oz	022G	26	9ea	6	6ea	50	0						
u de toilette				8oz	603	30	9ea	7	5ea	57	6	1/2oz	022H	41	6ea	10	1ea	77	6							
599				16oz	604	48	0ea	11	8ea	89	0	1oz	022	73	6ea	17	11ea	137	6							
689				perfume 1/2oz	95	11	3ea	2	9ea	21	0	2oz	022A	105	0ea	25	7ea	195	0							
690				1/2oz	90	17	0ea	4	2ea	32	6	<b>Ledermycin (746 Lederle)</b>														
600				1/2oz	530G	20	0ea	4	10ea	37	6	ointment T5 0.5%														
639				1/2oz	530H	30	0ea	7	3ea	56	0	20gm 3 10ea														
649				1oz	530	49	6ea	12	1ea	92	6	<b>Leichner (749 Leichner)</b>														
650				2oz	530A	90	0ea	21	11ea	168	0	Beauty Touch refill														
651				4oz	530B	153	0ea	37	4ea	285	0	27 6														
616				presentation packs	1/2oz	022G	26	9ea	6	6ea	50	D Leviton (187 B5) tablets														
836				1/2oz	022H	41	6ea	10	1ea	77	6	Linda Lee (855 Mondart)														
head (1188 Steiner)				1oz	022	73	6ea	17	11ea	137	6	hair spray														
ir conditioner				2oz	022A	105	0ea	25	7ea	195	0	6oz 24 0														
8oz 32 8				<b>Isomat-Rapid (16 Agfa)</b>																						
8 2				camera	—	—	—	—	348	9	<b>Liquilove</b>															
4 9				e.r. case	—	—	—	—	31	6	(1188 Steiner)															
4 9				<b>Jackson's (662 EJ)</b>																						
Thymoline (261 Christy) 6oz				barley sugar	4oz	11	6	1	7	1	51 3															
ne (520 Gnome)				drops	4oz	11	6	1	7	1	Liquilan (682 KCL)															
jectors				glucose mints	4oz	11	6	1	7	1	skin lotion															
Classic				mixed fruit	4oz	11	6	1	7	1	17 2															
741				drops	4oz	11	6	1	7	1	27 4															
749				Devon fruits	4oz	11	6	1	7	1	4 3															
743				night cough	1oz	15	0	3	7	2	6 10															
746				lozenge bismuth	50	13	8	3	3	—	2 6															
745				dyspepsia	2oz	15	0	3	7	2	10 8															
744				pastilles creds	2oz	15	0	3	7	2	6 2															
756				Envoy	2oz	15	0	3	7	2	16 8															
733				tangerine	4oz	11	6	1	7	1	4 2															
734				C.S.	—	—	—	—	—	—	1 4															
735				peppermint	2oz	13	8	1	11	1	6 2															
736				sulphur	2oz	13	8	—	—	1	16 8															
(532 Goya)				bismuth	1oz	7	0	—	—	1	4 2															
odorant dry				<b>Jests (440 Ex-lax) antacid mints</b>																						
refill				<b>Jeypine (671 Jeyes) 8oz 13 9</b>																						
gic moisture				<b>Kamilliosan (221 Camden)</b>																						
(532 Goya)				ointment	20gm	28	0	7	0	4	<b>Man Zan (372 De Witt) retail column should be in bold type</b>															
dar Wood				1lb	20	0ea	5	0ea	35	0	<b>Matthews (1085 RB)</b>															
vel after-shave 135				<b>Kaomin (413 Lilly)</b>																						
ve cream lather 139				<b>Kathleen Court (682 KCL)</b>																						
lden Girl				facial youth cream	27	4	6	10	4	0	<b>Maws (810 Maw)</b>															
lipstick luxury 103				tube	48	0	12	0	7	0	bandages B.P.C.															
mith's (544 Grossmith)				jar	37	6	9	4	5	3	lin x 3yd															
of the valley bath				soap (3)	37	6	9	4	5	3	1 1/2 x 4yd															
ystals 809/909 44 6				<b>Klik (563 Hampshire)</b>																						
ain (548 Guerlain)				air freshener	35	0	—	—	3	11	2in x 4yd															
stal vision				fly killer	35	0	—	—	3	11	2 1/2 x 4yd															
stop (291 Consolidated)				Kodak (711 Kodak)	Instamatic camera	200	82	10 1/2ea	20	9ea	148	3	3in x 4yd													
ction 2mils 6 24 0ea				cine camera	—	—	—	—	630	0	4in x 4yd															
a Rubinstein (596 HR)				EYE half-frame	—	—	—	—	630	0	6in x 4yd															
mitar long-lash				Kwells (893 Nicholas)	22	6	—	—	2	6	triangular															
refill				old type	22	6	—	—	2	6	36in sides															
ort Plus (799 MP)				Lady Manhattan (462 Field)	perume	55	4	13	2	8	cellulose tissue															
positories 6 5 4				perume	55	4	13	2	8	0	B.P.C. 16oz															
ort Plus (799 MP) suppositories 8				talcum	34	6	8	2	5	0	3 8 1/2ea															
etalin (413 Lilly) 5mils				<b>L'Air de Temps (Nina Ricci) (1402 Buser)</b>																						
Dri (1052 Revlon)				dusting powder TB3	—	—	—	—	19	6	2 5 1/2ea															
on deodorant				TB1	—	—	—	—	55	0	1oz															
son (606 Hill)				TB2	—	—	—	—	38	0	7 5															
oculars				sachet	—	—	—	—	21	0	2oz															
8 x 30				foam bath essence	—	—	—	—	37	6	4oz															
8 x 40																										



[illegible]



ussin (1071 Robins) 4oz					eyelashes	68 0	—	8 6	junior linctus	17 6	4 4½	2 11
(292 C) tablets					fingerails natural	76 0	—	9 6		27 0	6 9	4 6
omycin (583 HP)					Streptomycin (518 Glaxo) T5				speedy cough	17 6	4 4½	2 11
up TS 60mils	8 6	—	12 9		vial 1gm	10 12 6ea	—	18 9		27 0	6 9	4 6
s (1082 RKO)					1 5 0ea		—	7 6	diarrhoea			
ie juice cordial					D Streptomycin (518 Glaxo) existing entry				mixture 4oz	18 0	4 6	3 0
26oz 32 0	4 10	3 9			Substral (1539 BV)				ear drops golden	16 9	4 2	2 9
afer Improved (1176 Squibb)					plant food 10oz	30 0	—	3 9	embrocation 4oz	20 0	5 0	3 0
t, vial 50 dose	6 270 0ea	—	405 0		Suleo (671 Jeyes)				extract malt and			
88 Steiner)					emulsion 3oz	13 8	3 5	2 0	c.i.o. 1lb	28 6	—	—
mpoo					shampoo sachet	61 8	15 6	9	2lb	52 0	—	—
ube	39 6	9 10	5 9		20oz (1gross)	60 0	15 0	8 9	flavourings			
ar No. 1	65 0	16 3	9 6		Sun-O-Life (29 Alfonal)				synthetic ½oz	15 6	—	2 0
a (563 Hampshire) shampoo, liquid					sunflower seed				food colourings ½oz	15 6	—	2 0
ogen (1530 Fisons)					oil ½pt	22 5	—	2 4	synthetic ½oz	15 6	—	2 0
ected multivitamins					1pt	38 5	—	4 0	foot powder 19 0	4 9	3 0	3 0
120 15 8ea	—	23 6			1gall	24 0ea	—	30 0	fuller's earth			
ra (599 Henleys)					Supercroft (563 Hampshire)				cream 15 0	3 9	2 0	2 0
by pants, small					hand cream aerosol	35 4	8 10	4 9	powder 14 0	—	2 0	2 0
(white only)	11 8	—	1 6		hair spray economy 41 0	10 1½	5 6		Gee's linctust† 3oz	13 6	—	1 9
ontinence pants					super size 70 8½	17 5½	9 6		6oz	22 6	—	3 0
pull-on hips					Supersealer (1052 Revlon)				ginerade			
32in 30 0	3 0	4 0			0228 45 6	11 4½	6 9		concentrate 16 0	2 5	2 3	
56in 58 0	5 7	7 9			Sustac (972 Pharmax)				glycerine suppositories			
58in 59 0	5 8	7 11			tablets gr. 1/25† 30 9 0ea	—	12 0		infants 30gr	14 6	—	—
60in 60 0	5 9	8 0			250 69 0ea	—	92 0		children's 60gr	18 9	—	—
drop-front					gr. 1/10† 30 11 0ea	—	14 8		adult's 90gr	23 0	—	—
26-32in 46 9	4 6	6 3			250 85 0ea	—	113 4		indigestion			
56-60in 90 0	8 8	12 0			Swiftan (682 KCL)				lozenges 16 0	4 0	2 9	
trine (972 Pharmax)					suntan cream 27 4	6 10	4 0		influenza mixture			
lets 30mgm 30 9 0ea	—	12 0			Swimmy (900 Norton)				red 18 0	4 6	3 0	
lets 250 69 0ea	—	92 0			floating soap 3½oz	17 0	4 3	2 6	iodised throat			
ies (153 BSC)					Tampovagin (221 Camden) pessaries				lozenges 10 9	2 8	1 8	
ucus 100 two-ply (2 doz)	44 6	—	2 9		penicillin, sulpham-				16 0	4 0	2 9	
ast (1052 Revlon)					ilamide and				iron and yeast			
0216 37 0	9 3	5 6			sulphathiazole				tonic tablets 22 6	—	3 0	
(763 Linfield)					†s4B 12 54 0	—	6 0		juniper beans 12 6	3 1½	2 0	
ndruff treatment					100 174 0	—	19 4		20 6	5 1½	3 6	
50mils 55 8	11 0	6 6			100 26 0ea	—	34 8		linseed and liquorice			
(333 Cupal) aerosol					stilboestrol and				lozenges ½oz	6 6	—	10½
al fly killer 38 4	—	3 11			lactic acid 5% 12 57 0	14 3	7 6		menthol and winter-			
-Kil (333 Cupal)					†s4B 12 57 0	14 3			green cream 17 0	4 4½	3 0	
g tablets 75 15 0	—	3 11			D Tampovagin (221 Camden) pessaries				nebuliser 20 0	—	3 0	
150 24 6	—	2 9			stilboestrol and				ointment 18 6	4 7½	3 0	
anol (1320 WSP) tablets 500					lactic acid 5% 50 and 100				29 0	7 3	5 0	
lan Parenteral (938 PD)					Tenavoid (747 Leo)				tube 18 6	4 7½	3 0	
120mgm/ml					tablets †s4B 24 52 0	—	5 9		olive oil 2½oz	11 9	—	1 9
10mils 6 8ea	—	10 0			Tenuate (838 MN)				5oz 19 9	—	3 0	
100mgm/ml					tablets †s4B 30 68 0	—	8 6		10oz 35 9	—	5 6	
10mils 20 0	—	30 0			100 16 8ea	—	25 0		20oz 65 0	—	9 3	
-Eze (635 Hulse)					500 80 0ea	—	120 0		pastilles			
ashless shave					Tenuate Dospan (838 MN)				Gee's linctust† 2oz	13 9	—	1 9
ream 19 0	4 9	2 8			tablets †s4B 15 62 0	—	7 9		glycerine, lemon			
(1320 WSP) asthma inhalant 8 oz					100 31 10ea	—	47 9		and honey 2oz	13 9	2 1	1 11
ate (1320 WSP) tablets 250					That Man (1052 Revlon)				glycerine 2oz	13 9	—	1 9
kin's (1141 Simpkin)					after-shave 0151 94 0	23 6	14 0		thymol 2oz	13 9	—	1 9
Cees					pre-electric shave 117 6	29 4½	17 6		peppermint oil			
range 10 0	1 6	1 3			Thiaver (1061 Riker)				solution ½oz	10 6	—	1 6
blackcurrant 10 0	1 6	1 3			tablets †s4B 100 50 4ea	—	75 6		pile ointment tube 20 6	5 1½	3 6	
ose hip 10 0	1 6	1 3			500 246 4ea	—	396 6		jar 20 6	5 1½	3 6	
Cets 25 0	3 9	3			Tisane de Durbon (573 JH)				pine disinfectant			
(gross) (gross)					blood tonic 46 0	11 6	6 9		8oz 13 0	—	1 9	
ntholated					Top Ten Tips (1372 CCL)				16oz 21 6	—	3 0	
ronchial					fingerails 39 4	—	4 11		raspberry vinegar			
astilles 15 0	3 9	2 3			Touch and Glow (1052 Revlon)				2½oz 13 0	—	1 9	
stilles, bronchial with friars balsam					0902 52 0	13 0	7 9		5oz 19 0	—	2 9	
Deep (76 Atkinson)					Trimster (1442 Trimster)				with olive oil			
uty bath small 24 1	5 10	3 6			baby pants 78 0	—	8 9		2½oz 12 9	3 2	2 0	
large 60 3	14 8	8 9			nappies 10 33 6ea	—	45 0		5oz 20 6	5 1½	3 6	
1113 5&B)					Triptafen (34 A & H)				sulphur tablets			
tan oil 28 5	7 1	3 9			tablets †s4B 50 13 10ea	—	20 9		orange flavour 5 6	1 4½	10½	
ire (563 Hampshire)					500 110 8ea	—	166 0		toilet lanolin 15 0	3 9	2 6	
ling tablet 7 6½	1 10½	1 0			50 16 2ea	—	24 3		toothache drops 15 6	3 10½	2 6	
Queen (29 Alfonal)					500 129 4ea	—	194 0		wart paint 15 6	3 10½	2 6	
ant cream					Tru-Gel (893 Nicholas)				wintergreen			
owder 1lb 62 5	—	3 3			standard tube 20 9	4 11	3 0		ointment 11 9	2 11	1 9	
fat cheese 2oz 40 0	—	10			economy 35 1	8 4	4 11		witch hazel jelly 15 0	3 9	2 6	
5doz)					Ucal (1261 UCAL)				worm syrup 20 6	5 1½	3 6	
ny (1543 Irvine) electric blankets-					aerosol antiseptic 33 6	8 4½	4 6		Uromide (291 Consolidated)			
le 2in x 84in	—	159 6			aerosol athletes foot 33 6	8 4½	4 6		tablets 25 6 6ea	1 7½ea	—	
ble 2in x 84in	—	179 6			aerosol moth 33 6	—	3 9		200 38 9ea	9 8ea	—	
ual control	—	199 6			antiseptic healing				Vademecum (1539 BV)			
s standard	—	39 6			ointment 14 9	3 8	2 3		mouthwash 25mils 44 4	11 1	5 9	
e luxe	—	59 6			universal cream 21 6	—	2 11		50mils 74 3	18 7	9 11	
lin (397 Dunster)					baby cream 4oz 29 0	7 3	4 6		75mils 101 1	25 3	13 4	
sules 100 37 6ea	—	—			4oz 29 0	7 3	4 6		tooth-paste 2oz	24 0	6 0	3 2
250 90 0ea	—	—			baby powder 15 3	3 9½	2 3		Valium (1074 Roche)			
500 169 0ea	—	—			bay rum and 4oz 17 3	4 3	2 11		ampoules 10mgm/			
1000 322 0ea	—	—			bay rum and 4oz 17 3	4 3	2 11		2mils †s4B 6 11 8ea	—	17 6	
Tan (366 Dendron)					eantharides 4oz 17 3	4 3	2 11		syrup 2mgm/5mils			
Tan (47 Anesthan)					blood purifier 6oz 18 0	4 6	2 11		†s4B 100mils 8 0ea	—	12 0	
ginal, mousse or					borated zinc and 14 0	3 6	2 3		500mils 36 8ea	—	55 0	
extra soft 86 0	21 6	12 6			starch powder 17 6	4 4½	2 11		tablets 10mgm			
ond (1113 5&B)					lozenges 14 6	3 7½	2 3		†s4B 100 36 0ea	—	54 0	
mpoo liquid,					burn dressing 19 6	—	2 11		500 145 4ea	—	218 0	
lain or					chilblain paint 15 6	3 10½	2 6		Valoid (208 BW)			
edicated sachet	5 5	1 4	9		children's aspirin 11 9	2 11	1 11		injection			
bottle 17 0	4 3	2 3			cough mixture, all 14 3	3 6½	2 6		50mgm/mils †s7 5	60 0	—	7 6
ar (1188 Steiner)					fours 15 0	3 9	2 6		Velouty (379 Dixor)			
a essence	51 3	12 9	7 6		children's cherry 14 0	3 6	2 6		powder cream			
dentifrice No. 0	44 6	11 1	6 6		bark 2oz 14 0	3 6	2 6		tube 11 5	2 10	1 8	
No. 1	60 0	15 0	8 9		4oz 21 6	5 4½	3 6		18 7	4 8	2 10	
metal rinse					adult's cherry 4oz 21 6	5 4½	3 6		36 8	9 2	5 6	
o. 1	51 3	12 9	7 6		cough 4oz 21 6	5 4½	3 6		jar 34 0	8 6	5 0	
o. 2	72 0	18 0	10 6						Vibazine (583 HP)			



**D Vigdor (299 CV) existing entries**  
**Vigdor (299 CV)**

after shave lotion	572	120	0	29	3	17	6
bath oil 3 Cracker	356	37	8	9	2	5	6
Brolly	334	27	6	6	9	4	0
Cupid Heart	360	19	0	4	7	2	9
Diabolo	339	24	0	5	10	3	6
Fairy Lantern	336	29	0	7	1	4	3
Fairy Wand	330	20	9	5	1	3	0
Golden Roses							
capsules	359	24	0	5	10	3	6
Introduction to							
Luxury	333	48	0	11	9	7	0
bubble bath Pink							
Champagne	346	17	0	4	2	2	6
	345	32	6	7	11	4	9
	347	65	6	16	0	9	6
eau de Cologne	590	31	0	7	7	4	6
	589	44	6	10	10	6	6
Cologne or							
lavender	560	17	3	4	2	2	6
	563	72	0	17	7	10	6
Cologne export							
Champagne	569	51	6	12	7	7	6
Raffia Net	580	44	6	10	10	6	6
Winchester	582	44	6	10	10	6	6
Verona	583	82	0	20	0	12	0
	586	120	0	29	3	17	6
Chianti	587	31	0	7	7	4	6
perfume							
Devon Violets	722	46	4	11	4	6	9
Silver Roses	733	31	0	7	7	4	6
<b>Voulez-Vous (1464 D'Orsay)</b>							
parfum de							
toilette	2oz 601	11	3ea	2	9ea	21	0
	4oz 602	19	0ea	4	9ea	35	6
	8oz 603	30	9ea	7	5ea	57	6
	16oz 604	48	0ea	11	8ea	89	6

**atomiser**

3½oz 650A	35	0ea	8	7ea	65	0
refill 650AR	28	0ea	6	9ea	52	0
perfume ½oz 95	11	3ea	2	9ea	21	0
½oz 90	17	0ea	4	2ea	32	6
½oz 040G	22	6ea	5	4ea	42	0
½oz 040H	35	0ea	8	5ea	65	0
1oz 040	55	0ea	13	5ea	102	6
2oz 040A	96	0ea	23	5ea	179	0
4oz 040B	169	0ea	41	5ea	315	0
atomiser ½oz 50A	26	0ea	6	4ea	48	6

**D Wallis (1479 Wallis)**

super sacharin	100	4	6	—	9	—
	500	15	0	—	2	3
<b>Wellborn (1154 S&amp;N)</b>						
tablets gr. 10 ts48	50	60	0	—	7	6

**10 and 25**

<b>White Cross (681 K)</b>						
cough mixture	2oz	12	0	3	0	1
	4oz	17	0	4	3	2

**White Fire (544 Grossmith)**

bath crystals	609	44	6	11	1½	6
bath cubes	605	27	0	6	9	4
bouquet perfumed						
Cologne	603	34	0	8	6	5
	613	48	0	12	0	7

**complexion**

soap	604	41	0	10	3	6
dusting powder	606	58	0	14	6	8
	606X	46	0	11	6	9
hand lotion	612	34	0	8	6	5
perfume	600	34	0	8	6	5
	601	65	0	16	3	9
skin perfume	616	51	0	12	9	7
talcum	608	36	0	9	0	5

**White Mink (1188 Steiner)**

perfume						
handbag size	44	6	11	1	6	6

**Windsor (1070 Windsor)**

bath crystals	1222	52	6	12	10	—
bath cubes	1216	22	8	5	6½	—
bath disks	1203	17	4	4	2½	—
hand cream	1221	38	6	9	4½	—
perfume stick	1219	26	0	6	4	—
soap, toilet	1201	9	4	2	3½	—
luxury	1202	14	11	3	7½	—
talcum powder	1215	24	5	5	11½	—
talcum puffer	1220	38	6	9	4½	—

**Wright's (1351 WLU)**

shaving						
cream lather	21	4	5	4	—	—
stick	18	9	4	8½	—	—
refill	11	5	2	10½	—	—

**York Town (1131 Shulton)**

retail prices should be in bold type

**Young's (1538 Marcos)**

hair conditioner	—	—	—	—	—	—
pressing oil	—	—	—	—	—	—
shampoo medicated	—	—	—	—	—	—

**AMENDMENTS TO KEY  
TO SUPPLIERS**

Abbey=Abbey Perfumery Co., Ltd., 76

London, E.C.1. Clerkenwell 2971.

116 Benton=T. L. Benton & Co., Ltd., 186 5e

Road, London, N.7. Archway 2216.

243 CML=Cellular Medicaments, Ltd.,

Street, Edgware, Middlesex. Edgware 5551.

437 EW=Evan Williams Beauty Aids,

Hornsey Road, London, N.7. North 6623.

485 Fulford=G. T. Fulford Co. (U.K.), Ltd.

Road, Hatch End, Middlesex, Hatch End 1051

## THIS WEEK'S CHANGES

Prices are given in the sequence: Trade price per doz./purchase tax per doz./retail price (bold if maintained), thus:—17s 11d/4s 3d/2s 3d. A dash — in any column indicates that the manufacturer has provided no figure appropriate to that column.

**• Adox (520 Gnome)**

cameras 35mm							
Golf I	—	—	204	0	—	—	—
Golf IA	—	—	263	7	—	—	—
Golf IIIA	—	—	666	0	—	—	—
case for above	—	—	38	4	—	—	—
Polo I	—	—	198	3	—	—	—
Polo IB	—	—	332	6	—	—	—
Polomat I	—	—	519	6	—	—	—
case for above	—	—	43	7	—	—	—
films black and white							
roll 120, 620, 127	—	—	—	3	9	—	—
35mm cassette							
36 exp	—	—	—	7	5	—	—
20exp	—	—	—	5	7	—	—
daylight refill	—	—	—	5	7	—	—
36exp	—	—	—	4	5	—	—
darkroom refill	—	—	—	4	5	—	—
36exp	—	—	—	4	6	—	—
Rapid cassette	—	—	—	11	7	—	—
12exp	—	—	—	36	1	—	—
5 metre lengths	—	—	—	23	7	—	—
17 metre lengths	—	—	—	10	6	—	—
cine reversal 8 mm	—	—	—	12	7	—	—
U17 and U27	—	—	—	17	0	—	—
colour negative NC17	—	—	—	31	9	—	—
roll film 120	—	—	—	690	8	—	—
35mm cassette	—	—	—	806	3	—	—
20exp	—	—	—	—	—	—	—
36exp	—	—	—	—	—	—	—
colour reversal C18	—	—	—	—	—	—	—
35mm cassette	—	—	—	—	—	—	—
36exp	—	—	—	—	—	—	—
projector 300-M	—	—	—	—	—	—	—
800-M	—	—	—	—	—	—	—

**D Adox (520 Gnome) existing entries**

<b>Albucid (187 B5)</b>							
eye drops							
ts4B 10% 14mils	45	0	—	5	8	—	—
ts4B 20% 14mils	46	0	—	5	9	—	—
ts4B 30% 14mils	47	0	—	5	11	—	—
ointment 2½% 4gm	19	0	—	2	5	—	—
6% 4gm	19	0	—	2	5	—	—
10% 4gm	22	0	—	2	9	—	—

**Alcon (179 BDH)**

contact lens							
solution 60mils	7	0ea	—	—	—	—	—

**Alupent (154B) distributors 501 Geigy)**

solution 5% 7.5mils	5	0ea	—	7	6	—	—
solution 5% 10mils	—	—	—	—	—	—	—

**A Andre Philippe (48 AP)**

shampoo							
Softaire sachet	7	3	4	10	6	—	—

**• Aniferol (529 Gorney)**

dandruff remover	25	0	6	3	3	9	—
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**A Cortucid (187 B5)**

cream ts4B 3gm	69	0	—	8	8	—	—
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**• Dalmas (347 Dalmas)**

2-way rheumatic							
treatment	47	7	11	11	6	11	—

**• Diecac (328 CCC)**

injection (vet)							
100mils	—	—	—	40	0	—	—

**A Emge (49 AF)**

tablets	40	61	0	15	3	8	1
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**• Go (994 P&M)**

after bath freshener							
7755	85	9	21	5	12	6	—
roll-on refill	7754	24	0	6	0	3	6
talcum powder							
7756	37	8	9	5	5	6	—

**• Harriet Hubbard Ayer (852 Molyneux)**

base de poudre jaspée	—	—	—	25	0	—	—
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**C Heinz (593 Heinz) strained foods**

apricots and apples can							
5oz	17	8	—	11	—	—	—
(2 doz)	—	—	—	—	—	—	—

**• Johnson's (674 JEP)**

syringes sterile single-use							
2mils	8x50	133	4	—	20	10	—
with needle							
6x50	150	0	—	30	10	—	—
5mils	8x25	100	0	—	14	7	—
with needle							
8x25	133	4	—	19	7	—	—

**• Kleinerts (706 Kleinerts)**

needles sterile single-use							
one-way under-							
nappies (2)	32	0	—	3	11	—	—

**• Misty (1092 Saga)**

cuticle remover	8	7	2	4	1	5	—
polish remover	8	7	2	4	1	5	—
Step up	15	2	3	9½	2	6	—

**• Neo-Structor (529 Gorney)**

hair rebuilders	25	0	6	3	3	9	—
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**• Noxyflex (503 G)**

aerosol	4oz	13	6ea	—	20	3	—
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